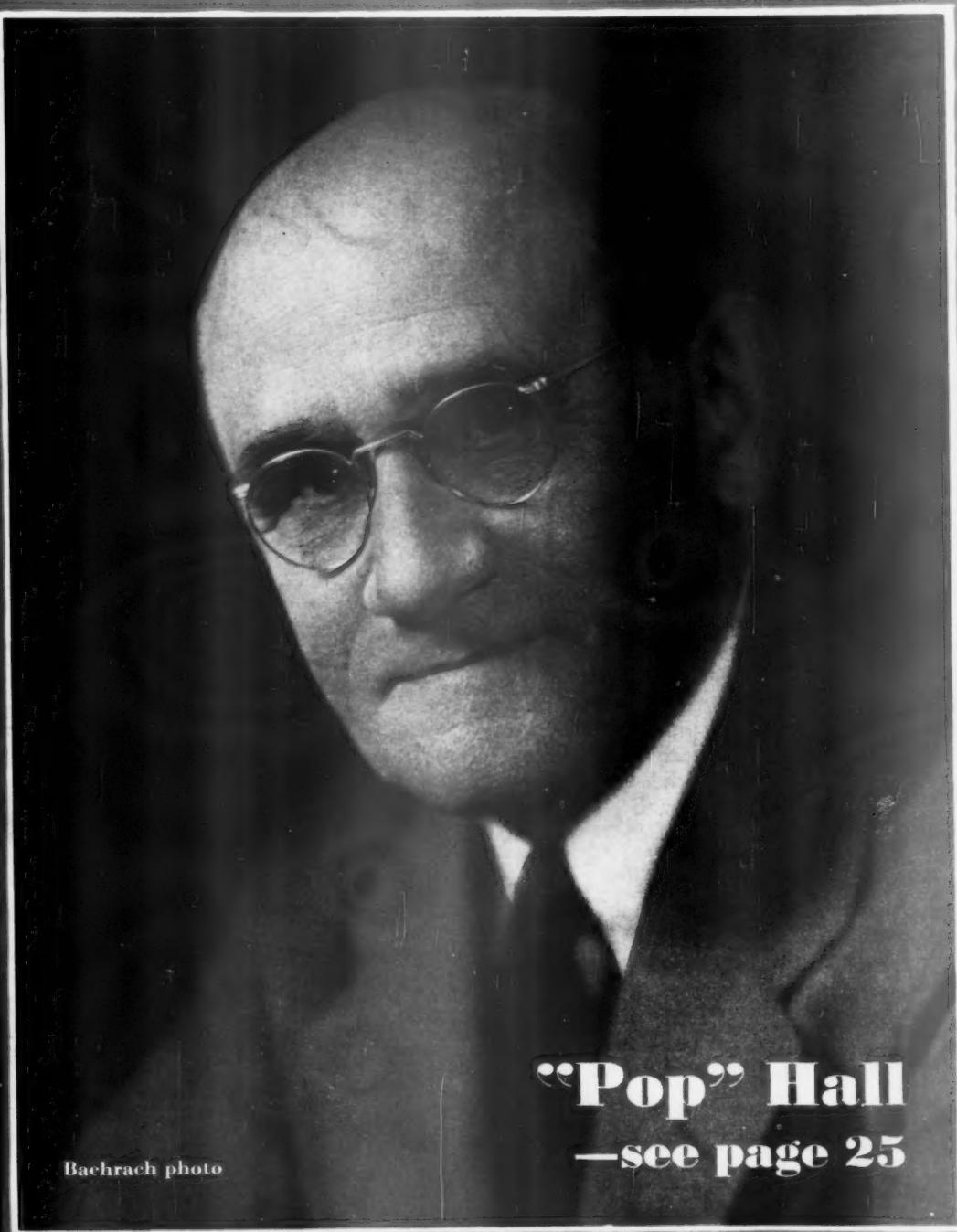


SINCE 1915 • THE NATIONAL MAGAZINE FOR PURCHASING AGENTS

PURCHASING

SEP 17 '38



Bachrach photo

"Pop" Hall
—see page 25

Vol. VI No. 9

SEPTEMBER 1938



**" THIS ONE
MISSING ITEM
IS HOLDING UP
Everything"**

● A long list of steels and steel products needed for a particular job—the order split among a number of manufacturers—all items in the list received but one—yet the delay in receiving that one item holds up the entire job.

Don't let this happen to you. When you have a list of steels and steel products to buy, consult a Republic representative. By placing all or the bulk of the order with Republic, you not only insure uniform high quality in your purchases—you insure delivery of every item when you need it. And you simplify interviewing, order-writing, tracing, checking, bookkeeping and the detail of writing and mailing a number of checks.

Think first of Republic. In the long list of items manufactured by Republic, its divisions and subsidiaries, you'll find practically every steel and steel product you need. Republic Steel Corporation, Cleveland, Ohio.

PRODUCTS OF REPUBLIC THAT YOU SHOULD KNOW ABOUT

{A few of the C's in the complete list of Republic products}

CABINETS OF ALL TYPES
CARBON STEELS
CARBURIZING STEELS
CASEMENT WINDOWS
CASING—OIL COUNTRY AND WATER WELL
CLIPS, WIRE ROPE
COKE
COLD FINISHED STEELS
COLD HEADING WIRE
CONDENSER TUBES
CONDUIT
COPPERED WIRE
CORRUGATED METAL PIPE (CULVERTS)

Ask us to send you a complete list of Republic products.

Republic Steel

BERGER MANUFACTURING DIVISION - STEEL AND TUBES INC.
UNION DRAWN STEEL DIVISION - TRUSCON STEEL COMPANY
NILES STEEL PRODUCTS DIVISION



When writing Republic Steel Corp. for further information, please address Department EP



"Now they're making hose of coke, limestone and sea water"

A typical example of Goodrich development in Rubber

HOSE is one of the latest things to be made with materials taken out of the sea and the ground. For years hose for gasoline pumps had to be specially made—with metal inside, heavy fabric outside—because gasoline dissolves the rubber of ordinary hose. But this metal-and-fabric hose was bulky and stiff, especially in freezing weather, and had to be replaced frequently.

Then Goodrich developed new synthetic elastic compounds and established

a special "synthetics department," to apply them to rubber products of all kinds.

One of those products is a light, flexible, easy-handling, fast-flow gasoline hose that station attendants all like and that saves money for the service station owners.

It's an illustration of the Goodrich attitude toward all new things. Rubber products must change and improve just as mechanical products do—and Goodrich adopts that "spirit

of change" toward belting, hose, rolls, and all other industrial rubber products no matter how commonplace they may seem. It's the reason you save time and money when you specify *Goodrich* to your distributor. The B. F. Goodrich Company, Mechanical Rubber Goods Division, Akron, Ohio.

Goodrich
ALL *products problems* IN RUBBER

PURCHASING

*Established 1915 as "The Purchasing Agent"
Consolidated with "The Executive Purchaser"*

PURCHASING is an independent journal, not the official organ of any association. It is the only publication of national scope devoted exclusively to the interests and problems of the purchasing executive in industry and government.

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VOLUME VI
NUMBER 9

PAGE 2

September 1938

15c A COPY, \$1.00 A YEAR
CANADA AND FOREIGN, \$1.50 A YEAR

PURCHASING

LONG DISTANCE hauls in net profits for fish firm



IT IS typical of the fish business that unpredictable orders frequently result in emergency stock shortages. In these cases, a Mid-Western fish distributor uses Long Distance to reach fisheries and other wholesalers *rapidly* and *directly* . . . and to make sure of a *net profit*.

This firm finds that Long Distance telephone service permits *economical* shopping among any number of fisheries for most favorable prices and delivery terms . . . prevents

hindrance to sales work through uncertainty of supply. Then, too, the telephone allows immediate commitments . . . helps quickly to match supply with demand.

Join the ranks of purchasing executives who know that the *present low rates* make Long Distance the inexpensive method of following leads . . . discussing price and quality . . . checking freight rates . . . placing orders.



THE SHIPPING BOX HAS
eye-appeal
IF IT'S MADE BY H & D



Let's get this straight. Out on "the market," in display windows and on the counters of commerce, your product faces thousands of eyes. Eyes to be pleased, flattered, influenced. Make sure both your product and its shipping box have that merchandising "must"--eye appeal. That's fundamental. So is this friendly advice . . . take your packaging problem to Hinde & Dauch . . . Authority on Packaging.



"IDEAS for Corrugated Boxes"--Illustrates the modern trend in shipping boxes, counter displays and shipper-displays. Write for your free copy now. The Hinde & Dauch Paper Company, Sandusky, Ohio.

Factories and Sales Offices in Principal Cities



HOWARD DAUCH

HINDE & DAUCH • *Authority on Packaging*

JUST A “FLASH in the PAN”

?

IS THE RECENT IMPROVEMENT in economic affairs simply a “flash in the pan” to be followed by a severe set-back?

MUST UNSTABLE ECONOMIC OBSTACLES such as politics, mounting national debt, unorthodox experimentation be hurdled before full recovery comes to stay?

FUNDAMENTALLY—SIGNALS ARE ALREADY SET which to many observers seem to indicate that basic recovery is now on the march and that 1939 will see higher prices.

COMMODITY PRICES TO DATE have shown no disposition to assume leadership. This may be judged as healthy but with economic betterment a possibility before the end of 1938, what's ahead for certain prices?

In just such a period the McGill Commodity Service can be of its greatest value to clients by keeping them informed of possible price trends in all basic commodities.

Write to address below for sample copies. No obligation.

McGILL COMMODITY SERVICE - Auburndale, Mass.

EFFICIENT BUYING IS THE KEY TO PROFITS TODAY

Yours on Request

Purchasing agents will find it well worth their while to read the publications reviewed on this and the following pages. From among the many submitted to us, they have been selected by the editors as having greatest interest and utility value to purchasing agents.

To obtain copies, simply fill in and mail coupon at the bottom of this page.

439. Facts about its electric screw drivers are presented in an 8-page catalog supplement issued by the electric tool division of The Stanley Works. Completely describes all models, which cover virtually all industrial requirements and which are adapted for use with bits for slotted or Phillips recessed head screws and with socket wrenches for bolts and nuts.

441. Appearance factors important to the "personality" of a business form the basis of a new "Check List" folder, recently released by Strathmore Paper Co. Letterheads are singled out for a special survey which includes comparative figures showing the cost of a completed letter on no-rag, 25% rag and 100% rag bond. Actual letterheads are enclosed.

442. "American PLUS Screws save thousands a year on the cost of fastening," says the purchase manager pictured in a new folder issued by American Screw Company. Other quotations cited: "Cut assembly time down to a fraction"; "Take half the work out of fastening"; "Eliminate spoilage caused by slipping drivers"; "Prevent lost-time accidents."

454. Timken Quality Tubing, latest addition to the Ryerson stocks of "Certified Steels," is the subject of a 24-page, 8 $\frac{1}{2}$ " x 11" illustrated booklet detailing numerous and varied industrial applications. Included are physical property specifications, tolerance charts, numerical equivalent tables, etc.

466. "Cutting Costs with Cold Drawn Steels," a highly interesting 24-page booklet issued by Union Drawn Steel Division of Republic Steel Corp., offers a non-technical explanation of what cold drawing is, the effects of cold drawing and its utilization in the manufacture of innumerable steel parts. How each of the following properties of Union cold drawn steels reduces costs is also discussed: high surface finish, accuracy to size, cross sectional accuracy, improved physical properties, improved machinability. Special sections also contribute to cost reduction.

468. The recently released 28-page, 8 $\frac{1}{2}$ " x 11" Section E of the Ferracute Machine Co.'s Catalog 22 illustrates the numerous types of embossing and coining presses adaptable for work on agricultural implements, automobile parts, bicycle parts; blanking, punching and shaping heavy sheet metal; cash registers, clocks, collapsible tubes, cutlery, electrical instruments, flanges, grease-cups, hardware, jewelry, perforated work, raised lettering and designs on sheet metal, typewriters and innumerable other articles.

469. The Lunkenheimer Co. has recently issued a new 44-page List Price Schedule which supersedes all previously published list prices. It covers the entire Lunkenheimer line of valves, boiler mountings and lubricating devices.

PURCHASING, 11 West 42nd St., New York, N. Y.

I wish to receive the following literature:

Numbers: _____

Name _____

Company _____

Address _____

City _____ **State** _____

PAGE 6

470. The new Brown & Sharpe No. 000 Plain Milling Machine is described in detail in an attractive, profusely illustrated 8-page bulletin. This machine has been designed specifically for the economical, rapid production milling of small pieces such as parts for sewing machines, firearms, electrical apparatus, business machines, etc. Broad ranges of speed and feed enable it to handle efficiently a wide variety of materials, using cutters down to the smallest end mills.

471. Steel Belt Plates with specially shaped holes which permit the rivet prongs to pass through in only one position are the subject of The Bristol Co.'s 4-page Bulletin No. 729. Contains full-size illustrations of available sizes, complete information concerning methods of applications and prices, also the kinds and sizes of belts that can be joined by means of these plates.

472. "The Story of Sponges and the Story of Chamois," an interesting and informative booklet issued by Schroeder & Tremayne, Inc., describes the origin, types and processing of sponges and chamois. Written primarily for salespeople, the booklet is also designed to help users purchase more intelligently.

473. Three new swatch sample books of 100%, 75% and 50% rag content index bristol have been released by the Rising Paper Co. The books show the full range of colors and weights available in these three lines.

474. An amply illustrated bulletin showing the wide range of products burned from rolled steel plates by modern flame cutting methods is available from Joseph T. Ryerson & Son, Inc.

475. A new pocket size (5" x 6 $\frac{1}{2}$ ") catalog containing 40 pages of data, tables, standards and applications has been issued by Holo-Krome Screw Corp. for users of socket head cap screws, hollow set screws, socket head stripper bolts and hollow pipe plugs.

476. Three newly developed super duty fire brick are described in a new 12-page, 8 $\frac{1}{2}$ " x 11" folder, "How to Reduce Spalling Costs," released by General Refractories Co. Charts graphically illustrate the descriptions of spalling, volume stability and load bearing tests.

477. Features of Barber-Colman "Pinwedge" positive adjustable expandable reamers are detailed in a well illustrated folder. Progressive photos show steps in expanding, reducing and eccentric relief grinding. Complete specifications given.

478. Complete descriptions, applications, chemical analyses and physical properties of 17 Murex heavy coated electrodes are contained in a 32-page booklet which should prove invaluable to all buyers of welding electrodes. Tables of recommended current strengths and number of electrodes per hundred pounds are included.

479. The new Fairbanks Catalog 53-49 illustrates 65 types of truck casters and wheels for practically every purpose. Complete specifications and data accompany each illustration.

480. Two new lightweight portable hydraulic industrial kits, christened "Porto-Power," for pipe and conduit bending and for factory maintenance work are fully illustrated and described in an attractive bulletin just issued by Blackhawk Mfg. Co. Saving of time and money plus increased efficiency in handling hundreds of plant maintenance jobs are claimed for "Porto-Power."

(Additional listings on pages 8 and 10)

PURCHASING



Yours on Request

Purchasing agents will find it well worth their while to read the publications reviewed on this and the following pages. From among the many submitted to us, they have been selected by the editors as having greatest interest and utility value to purchasing agents.

To obtain copies, simply fill in and mail coupon at the bottom of this page.

481. 4-drawer file cabinets with the capacity of 5 ordinary drawers, made possible by automatic expansion and compression, are illustrated and described in a folder released by Automatic File & Index Co. Of particular interest to "P. A's" is the account of a unique test proving that automatic compression adds over 25% capacity.

482. 21 different swatches of various types of "Fibre-down," a protective and decorative packing material, are contained in a new portfolio issued by General Cellulose Co. Information concerning sizes available, etc., is included.

483. "Solving the Problem of Coal and Ashes Handling in the Power Plant," a new 32-page Book No. 1510, offers ideas and suggestions for cutting handling costs in the power plant by means of elevating and conveying equipment, coal crushers, etc. Issued by Link-Belt Co., it contains many illustrations showing how a great variety of handling conditions have been met.

484. A new chart just released by Grinnell Co. features its complete line of adjustable pipe hangers and supports. The chart is made up in such a way that it can easily be retained on the "P. A's" desk for constant reference.

485. How to diagnose and correct engine troubles caused by worn or cracked bearings is told in Federal-Mogul's 36-page, 8½" x 11" "Engine Bearing Service Manual." Profusely illustrated, this manual contains a wealth of valuable information.

486. The new sample book of thin papers just announced by Esleek Mfg. Co. contains numerous samples for records, forms, copies, letterheads, advertising, legal documents, air mail, branch office and foreign correspondence. A variety of weights, finishes, and colors, in grades ranging from 25% to 100% rag content, are included.

487. "Stick-O-Paint," paint in solidified stick form, is described in a new folder issued by Markal Co. Produces permanent and lasting markings on virtually any type of surface, such as hot strip steel, cold sheet metal, bales, bags, crates, lumber, glass, stone, wood, cellophane, etc. Made in six colors.

488. "Helpful Hints on Sealing Methods," a new folder just issued by Moore & Thompson Div. Hudson Pulp & Paper Corp., offers valuable pointers and suggestions on the proper use of gummed paper tape, with a view to better protection of packages and saving through avoiding waste.

489. A bulletin illustrating designs and showing weights of steel posts for fencing, commercial and highway signs, snow fencing and various other purposes, has just been issued by Inland Steel Co.

PURCHASING, 11 West 42nd St., New York, N. Y.

I wish to receive the following literature:

Numbers: _____

Name: _____

Company: _____

Address: _____

City: _____ **State:** _____

490. What tools to choose and use for any cutting problem is presented in H. K. Porter, Inc.'s new catalog of hand-operated cutters. Replete with illustrations of tools, parts and actual on-the-job performance.

491. A 16-page, 8½" x 11" booklet, "Recommendations for Office Lighting," features large photographs of office interiors showing installations of the F. W. Wakefield Brass Co.'s line of "Commodore" lighting equipment, which utilizes Plaskon reflectors in sizes to accommodate from 200 to 1,500 watts. Noteworthy is a table giving recommended footcandle values for different types of office work.

492. The history and development of phosphor bronze is recounted in the Seymour Phosphor Bronze Manual, which answers questions concerning non-corrodibility, resilience, fatigue resistance, machinability, toughness. Also contains data, tables, list of applications, etc.

493. "Checking Up on Check Valves," an 8-page, 8½" x 11" booklet just issued by Crane Co., covers the whole check valve field in word, picture and diagram. The two basic types of check valves and their various applications are described, ten "Do's and Don'ts" are listed and a two-page "Handy Reference Guide to Crane Check Valves" is devoted to cross-section views.

494. Modex, the modern casein paint in powder form, is the subject of a 4-page, 8½" x 11" folder released by The Reardon Co. Ideal for interior finishes of offices, industrial and public buildings, Modex features include: more economical, requires no priming coat, easy to apply, exceptionally durable, dries quickly, washable, not subject to freezing or spoilage through bacterial formation, no costly metal containers, etc.

495. Of particular interest to "P. A's" in the Electric Storage Battery Co.'s 36-page, 8½" x 11" booklet, "Exide Batteries—Fifty Years of Achievement," are the pages illustrating 34 types of electric storage batteries and describing services for which they are used. Many of the hundreds of diversified applications of electric storage batteries in daily life are pictured.

496. The new L. L. Brown Paper Co.'s sample book of linen, linen typewriter and manuscript covers shows the complete range of weights in both laid and woven finishes, from substance 7 to 24, for Brown's Linen, a 100% rag paper. Swatches of pastel shades of manuscript covers are included.

497. Presented in Bulletin 401A is a new line of Dumore fractional horsepower motors, which are adapted for rotor applications, high speed drives, grinders and setups where high speed without vibration is a factor. Detailed specifications, blueprint diagrams and typical applications are given.

498. A new reversing motor-drive for planers, offering an improved quicker-acting combination of motors and control, is described thoroughly in Reliance Electric & Engineering Co.'s handsomely illustrated 12-page, 8½" x 11" Bulletin 306. Faster stopping and starting, greater convenience and safety are among the features of this new drive, which converts reversing time to cutting time and increased production.

499. Splendid illustrations of the latest models of Finnell electric floor machines adorn the 28-page, 8½" x 11" booklet presenting the Finnell System of waxing, polishing and scrubbing machinery. Reconditioning, mopping and water absorbing machines are also represented. Detailed specifications.

(Additional listings on pages 6 and 10)

WHEN YOU SAY

RUSH WE KNOW YOU MEAN IT!



POWER HOUSE REPAIRS URGENT— SCULLY COMES THROUGH

Friday morning at 11:45 we received an order for considerable tonnage of plates—the entire specification to be delivered 44 miles distant the same day. The first load reached the customer by 5:30 P.M. Repairs started the same night.



**Scully
Service**



FLOOD EMERGENCY MET WITH SCULLY SERVICE

Our Boston Warehouse had a tough problem to meet. One of the dams in the Connecticut River had washed away—Carnegie Beams needed at once. Speed was imperative. Our Boston Warehouse sent the beams to a fabricator, picked them up and shipped them. Although flood conditions necessitated shipments up into Canada and back, the beams were delivered on time.

SCULLY STEEL PRODUCTS CO.

Distributors of Steel, Steel Products, Copper and Brass

CHICAGO · NEWARK, N. J. · ST. LOUIS · BOSTON · ST. PAUL
CLEVELAND · PITTSBURGH · BALTIMORE



UNITED STATES STEEL



AIR EXPRESS

... Answers
Steamship's S. O. S.

Disabled freighter held at dock by smashed oil pump. Wirelessed manufacturer to rush 800-lb. replacement by AIR EXPRESS. 3-mile-a-minute speed direct to seaport saved days of delay and \$\$\$ in cargo. Cost? Discounted many times! Ships, factories, shops everywhere use AIR EXPRESS — 2500 miles overnight, for all rush



shipments. Direct super-speed service to 220 key cities and direct rail-air connections to 23,000 cities and towns in United States and Canada; also to Latin America, Honolulu and The Far East.

For complete door-to-door service phone RAILWAY EXPRESS — AIR EXPRESS DIVISION.

500. Catalog 38, issued by Ford Chain Block Division of American Chain & Cable Co., provides complete illustrations, diagrams, specifications, list prices and descriptions of Ford hoists, trolleys and accessories. Particularly emphasized is the Ford Ball-Bearing Tribloc, a spur-gear hoist offering features heretofore only found in the highest priced hoists.

501. An exceedingly clever wall chart, 20" x 30", entitled "The Tool Steel Selector," serves as a ready reference in the selection of the right tool steel for each job. Conceived by Carpenter Steel Co., the chart classifies nine tool steels into three groups—oil-hardening, water-hardening and red-hard, lists the type of tools for which each of the nine is recommended, and describes their physical properties.

502. Handsomely produced in rotogravure, Vol. 4 No. 1 of Chain Belt Co.'s "The Rex World" is replete with large on-location photographs showing how Rex chains and conveyors handle sugar, iron, oil, concrete, oysters, peaches, potatoes, sewage and trade waste.

PURCHASING, 11 West 42nd St., New York, N. Y.
I wish to receive the following literature:

Numbers: _____

Name _____

Company _____

Address _____

City _____ **State** _____

PAGE 10

503. Two new catalogs recently issued by National Tank & Pipe Co.: "The Wood Pipe Handbook," which contains 265 pages and over 150 illustrations and describes manufacture and applications of wood pipe; "Wood Tank Catalog No. 37", which shows many types of tanks, how tanks are designed and erected. Included in both publications are numerous designs, reference tables and data.

504. "How to Prevent Rotted Floors," a new pamphlet prepared by Stonhard Co., shows how to keep floors smooth, safe and sanitary and how to prevent "concrete dust." Photographs expose the most frequent sources of floor disintegration, demonstrating how to stop this trouble quickly and effectively.

505. An outstanding 86-page, 2-color catalog, wire-bound and cleverly indexed with marginal arrows, has just been produced by Continental Screw Co. Presents the complete Continental line of Phillips and Holtite screws, including wood, machine, cap, thumb, hollow-set, thread-forming sheet metal, lag, washer head, lock cap, drive and side knob screws; stove, machine, carriage, sink, step and hanger bolts; wing, machine screw and brass cap nuts; tubular rivets; escutcheon pins; stove, chair and ladder rods; finishing washers, etc. A table of finishes, groups, uses and principal advantages.

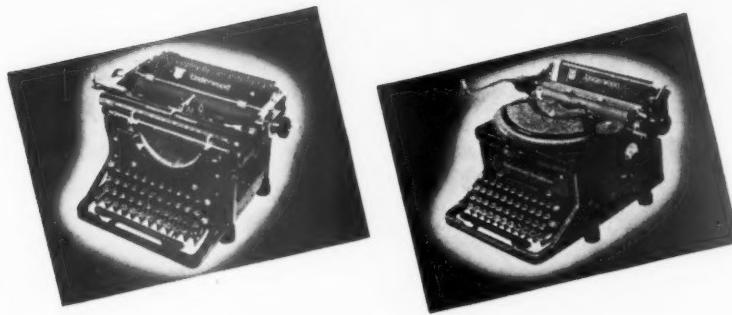
506. Recently released by Joseph T. Ryerson & Son is an unusually beautiful booklet which pictorially illustrates the unlimited possibilities of stainless steel for consumer products and industrial applications. Included is a brief summary of Allegheny Stainless products stocked by Ryerson for immediate shipment.

507. The latest Howard Paper Co. pamphlet, attractively printed in three colors on 24 lb. Howard white bond, stresses the attention value of the fourteen colors in which Howard Bond is available.

(Additional listings on pages 6 and 8)

PURCHASING

Underwood
Offers Business
a Choice of 3...



(1) THE STANDARD... (2) THE NOISELESS...

and now...the New

UNDERWOOD MASTER

New DUAL TOUCH TUNING

New ADVANCED STYLING

New SEALED ACTION FRAME

The Crowning Achievement of the Typewriter Leader of the World

Again Underwood leads the field...this time with an entirely new business typewriter that defies tradition in its design and challenges all machines to match its performance. It's the new Underwood Master!...The new Underwood Master gives you Dual Touch Tuning. Instead of a single adjustment for touch, the Master offers two...one that permits individual tuning

of each key to the finger tips; the other, keyboard controlled, varies the tension of all keys at the will of the operator...The new Underwood Master offers a completely sealed back, providing maximum protection against dust and assures even quieter operation. Typing visibility is 100 per cent complete...See the new Underwood Master. Check its exclusive features point by point. Note how its general performance has been placed on a new and higher standard. Then remember that the Master is one of



Master of Touch



Master of Speed

three models that Underwood offers to American business. Telephone for a free demonstration on your own work in your own office.

Every Underwood Typewriter is backed by nation-wide, company-owned service facilities.

Typewriter Division
UNDERWOOD ELLIOTT FISHER COMPANY
Typewriters...Accounting Machines...Adding Machines...Carbon Paper, Ribbons and other Supplies
One Park Avenue, New York, N. Y.
Sales and Service Everywhere
Underwood Elliott Fisher Speeds the World's Business
Copyright 1938, Underwood Elliott Fisher Company



WORLD'S LARGEST MANUFACTURER OF TYPEWRITERS

SEPTEMBER 1938

PAGE 11



"If I were an ADVERTISING MANAGER"

That's just one of the talks to be delivered anonymously by a masked speaker that will set every man thinking at the Annual Conference of National Industrial Advertisers Association in Cleveland, September 21-23. A second masked speaker will tell what he would do if he were a publication representative.

We're not going to tell you much here—just highlight the program enough to make your mouth water and your brain tingle.

T. M. Girdler, Chairman, Republic Steel Corporation, is scheduled for the opening address and when "T. M." talks he says something.

J. H. McGraw, Jr. will talk on "What I Would Do Now If I Were An Industrial Advertising Manager."

The new Publisher's Statement will receive full discussion.

Clinic sessions, so popular last year, will again cover a wide range of interesting subjects. Two half-day sessions instead of one. A general conference session will cover such subjects as "Preparing the Plan", "How to Gather Usable Material", "Copy Technique", "How to Sell Management", "Co-ordinating

Sales and Advertising" and "How and Why to Use an Industrial Agency."

Another session will deal with "Problems of the Small Advertiser", "Production Problems", "Public Relations"—and there are many others.

If I were an Advertising Manager, I certainly would start now to make plans to attend the 16th N. I. A. A. Conference even if I had to hitch-hike to Cleveland. And I would send in my advance registration now to—Ed. Bossart, Bailey Meter Company, Ivanhoe Road, Cleveland, Ohio.

IF I EMPLOYED AN ADVERTISING MANAGER—I would make certain that he attended this Conference, because changing times and markets demand a changed viewpoint—a new viewpoint that can be obtained only by hearing discussions by men whose experience is up-to-the-minute—right up to September 21st.



NATIONAL INDUSTRIAL ADVERTISERS ASSOCIATION

100 EAST OHIO STREET

• CHICAGO, ILLINOIS

Crane Check Valves

SWING TYPE

WAY WITH METAL DISC
BRASS: 34, 1303 (32)
IRON: 325, 375½ (156),
372, 373, 37½ (153)
FERROSTEEL: 38, 39E (157),
39A (158)

STRAIGHTWAY WITH REGRINDABLE DISC

BRASS: 35 (34 and 198),
34E, 35E (36 and 509).
IRON: 34½ (150).

CRANE 150

ANGLE TYPE

BRASS: 26 (31), 27 (33), 72 (34),
218, 219C (35).
IRON: 367½ (150), 645 (527).
STEEL: 178½N, 198½N (326).
Interior construction same as straight Globe type, with composition disc.

CRANE 150

VERTICAL TYPE

BRASS: 24 (31), 45 (526).
IRON: 368 (531).



CHECKING UP ON CHECK VALVES

CRANE

WHERE TO USE THIS CRANE CHECK VALVE ... IN POWER PLANTS AND FACTORIES

Lift check valves with composition discs are especially suited for service where discs must be renewed easily and quickly. They may be used on steam, air, gas and other vapor lines—provided that flow is not subject to severe pulsations. But that's about as far as general working principles can be applied in check valve selection—be it composition or metal disc lift check, cushioned disc, swing type—or any of their many variations.

Check valves can't be picked by a formula. Crane makes more than 90 types—each designed for a specific service. What type is best suited to your needs and where to use composition or metal discs in lift or swing type valves can be decided only by thorough knowledge of check valves and experience in their use. Your Crane Representative is specially trained in the solution of

back-flow control problems. He can offer the valve that is exactly matched to your requirements.

It's What's Inside That Counts!

It goes without saying that satisfactory performance of check valves depends on their quality as well as on selection of the proper type. Crane-Quality, backed by more than 80 years of manufacturing and valve engineering experience, is your assurance of superior goodness in Crane Check Valves all the way through—of proper design to perform efficiently, built right to give lasting service.

"Checking Up on Check Valves"

This new Crane booklet gives a lot of valuable information on the Crane line of check valves for every application. It contains the handy reference guide illustrated above. Write for your free copy today.

CRANE

CRANE CO., GENERAL OFFICES: 836 SOUTH MICHIGAN AVENUE, CHICAGO, ILLINOIS

NATION-WIDE SERVICE THROUGH BRANCHES AND WHOLESALERS IN ALL IMPORTANT CITIES

VALVES • FITTINGS • PIPE

PLUMBING • HEATING • PUMPS

IT'S FASTER

Phillips Screw Sets up to 30
Minutes Each Assembly Hour

IT'S SAFER

Driver can't slip from
screw's recess

IT'S STRONGER

Phillips Screw sets up
tighter and more securely

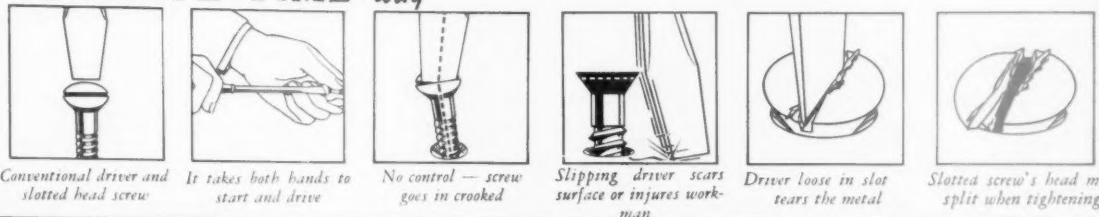


**So cost departments say —
"It's CHEAPER to drive Phillips"**

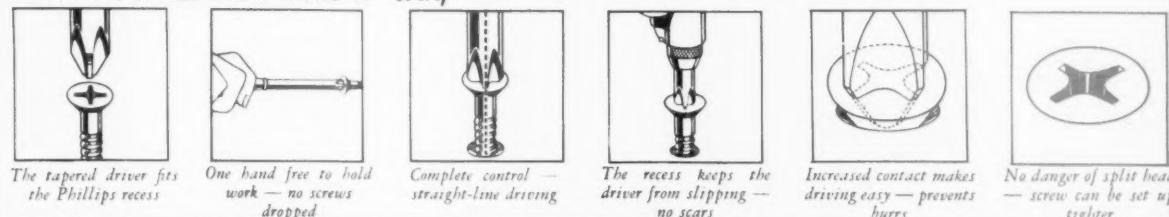
The manufacturers who were the first to standardize on patented Phillips Recessed Head Screws are the ones who have to cut costs without cutting quality — airplane factories, auto body makers, electrical appliance manufacturers, fine furniture makers. On all counts they've learned that the Phillips Screw is a low-cost fastening — faster assembly, less spoilage, fewer screws, longer tool life, better worker attitude. No wonder they say, "We could not afford to be without Phillip's Recessed Head Screws."

MEANWHILE, quality won't suffer. In fact, quality is improved — as evidenced by the fact that many manufacturers are instructing salesmen to make a sales point of the new fastening method. The public is learning that products assembled the Phillips way are stronger, more resistant to vibration, better-looking and safer. Any of the manufacturers listed below will tell you more. Ask for Folder B.

the "WASTE TIME" way



the "SAVE MONEY" way



ANY TYPE OF DRIVER CAN BE USED



FEWER DRIVER SIZES — 2 sizes of Phillips Drivers fit 85% of all screw sizes commonly used. 4 driver sizes fit the entire range of screw sizes, instead of 7 as with slotted screws. Made by many leading driver manufacturers. Ordinary drivers can also be used.

PHILLIPS SCREWS

Gain Time... Guide-Driver... Guard Work

U. S. Patents on Product and Methods Nos. 2,046,343; 2,046,837; 2,046,839; 2,046,840; 2,082,085; 2,084,078; 2,084,079; 2,090,338. Other Domestic and Foreign Patents Allowed and Pending.

MACHINE SCREWS

SHEET METAL SCREWS

WOOD SCREWS

STOVE BOLTS

— CLIP HERE AND MAIL TO ONE OF THESE MANUFACTURERS —

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Please send me — without obligation — Folder B on patented Phillips Screws.

Name

Company

Address

F. O. B.

(Filosofy of Buying)

Requisition, Rush

This is the requisition (RUSH) that came to the P. A.'s desk.

These are the wires the P. A. sent to seven vendors all intent on filling the requisition (RUSH) that came to the P. A.'s desk.

This is the estimating crew that toiled and figured the whole night through to get the bid in the morning mail in hopes that their plant would make the sale to fill the requisition (RUSH) that came to the P. A.'s desk.

This is the bid that took the cake. It was ten percent low through a slight mistake by the weary estimating crew that toiled and figured the whole night through in response to the wires the P. A. sent to seven vendors all intent on filling the requisition (RUSH) that came to the P. A.'s desk.

These are the workmen, feeling prime with their fat pay checks for overtime in filling the order that took the cake because of the ten percent mistake by the weary estimating crew that toiled and figured the whole night through in response to the wires the P. A. sent to seven vendors all intent on filling the requisition (RUSH) that came to the P. A.'s desk.

This is the truck that made the trip in record time the goods to ship, that were made by the workmen feeling prime with their fat pay checks for overtime in filling the order that took the cake because of the ten percent mistake by the weary estimating crew that toiled and figured the whole night through to get their bid in the morning mail in hopes that their plant would make the sale to fill the requisition (RUSH) that came to the P. A.'s desk.

These are the goods the auto bore in breathless haste to the buyer's door. They are resting now in a quiet bin far from the noisy factory din. The superintendent is glad to know they've come for perhaps in a week or so he *may* want to use them, or maybe wait to have them on hand for some distant date. He doesn't know of the hectic trip that was made by the truck the goods to ship, or about the workmen feeling prime with their fat pay checks for overtime, or about the estimating crew that toiled and figured the whole night through, or about the wires the P. A. sent to seven vendors all intent on filling the requisition (RUSH) he placed on the P. A.'s desk.

WITH wage-hour legislation and the outlawing of goods made by child labor now on the eve of their effective dates, mark up another item for the poor P. A. to watch. He's the fellow, you may recall, who must keep on learning more and more about more and

more, and is expected to know practically everything about practically everything, in order to do an acceptable job and keep his company out of trouble.

F. O. B. looks to his laurels with some concern, noting in the *News Record* for September 3 that Bob Kelley, Purchasing Agent for the Converse Rubber Company, appears as guest columnist for that publication. No tyro in journalistic circles, Bob has been a frequent and valuable contributor to the business press, and is U. S. correspondent for London's *India Rubber Journal*.

SALES SCIENCE, as expounded in parallel columns of the August issue of *Industrial Selling*:

He Contacts 'em All to Land Orders

It pays real money dividends to cultivate everyone in the plants you call on. That's the philosophy of Merritt Wilson, hard-hitting salesman of the R. C. Neal Co., Buffalo, N. Y.—and he can offer proof that his theory is right.

For Orders—Play Ball with P. A.

We were discussing in a general way the job of selling industrials, and the conversation naturally gravitated around to the old, old problem of reaching the right man in the plant. Mr. Paulsen (Earl L. Paulsen of B. R. Paulsen & Co., Chicago) had just made the point that he never went over the purchasing agent's head to see anyone.

There's the answer in a nutshell, presented by two practical experts in the selling game. You pays your money and takes your choice.

WE ARE not among those who believe that a slogan will pull business back to normal. With all due respect for the National Salesmen's Crusade and its rallying cry that "sales make jobs," it is equally true that jobs make sales, that good engineering and efficient manufacture make sales, that purchases make jobs, and that every sale is a purchase, depending on the point of view. We must all go forward together. Perhaps this is the spark to set business in motion. Surely it is a fine example of determination and enthusiasm to do something about the situation rather than waiting for nature to take its course, or going on relief.

One plank in the Crusaders' platform is to make more calls per day. That should make jobs—for purchasing agents.



By the Carload . . .
By the Pound . . .

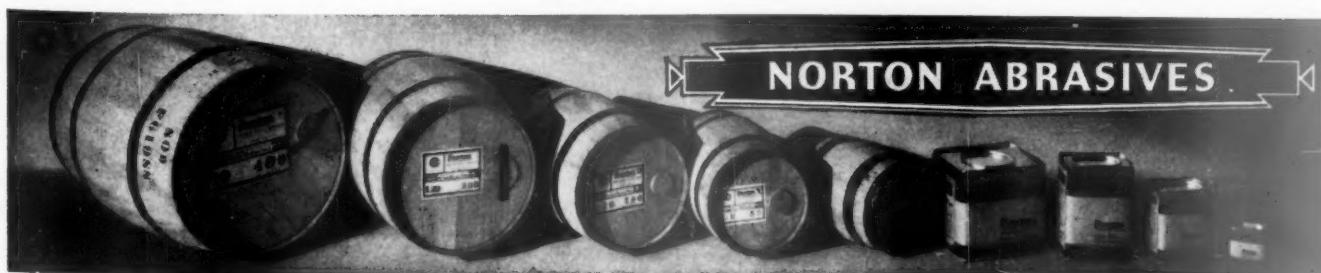
For Roughing . . .
For Finishing . . .

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FROM the coarse sizes for the first roughing operations down to the finest sizes for finishing, you'll like the way that Alundum Abrasive will cut polishing costs. Special shaping operations give a fast cutting grain; its high capillarity gives a strong, long-lasting wheel head. And special Norton Sizing methods assure exceptional uniformity in Alundum Abrasive—grain that gives the surface you want for buffing and plating.

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Ryerson Certified Alloy Steels are not only shipped quickly, but complete information arrives with the bars, including chemical and physical properties and record of heat treatment results. In this way, the heat treater knows what is in each alloy and exactly how to treat it for the best possible results.

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Ryerson Certified Carbon Steels, Tool Steels and Stainless Steels are ordered to exacting specifications and pass rigid inspection before they are accepted for Ryerson stock.

For high, uniform quality, specify Ryerson Certified Steels. They cost no more and quick shipment is assured.

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Alloy Steels—Tool Steels
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Beams and Heavy Structural Channels, Angles, Tees and Zees
Hot Rolled Bars—Hoops and Bands
Rails, Splices, Spikes, Bolts, etc.
Plates—Sheets
Strip Steel, Flat Wire, etc.
Boiler Tubes and Fittings
Welding Rod—Mechanical Tubing
Rivets, Bolts, Nuts, Washers, etc.
Reinforcing Bars
Babbitt Metal and Solder

RYERSON STEEL-SERVICE

Management Discovers Purchasing

THE International Management Congress meets this month at Washington. Purchasing men have been apprised that for the first time in its twenty years of existence, the subject of purchasing as a management function has a definite place on the discussion program. That is merely a technical distinction, however, for the program has consistently dealt with such topics as quality control, inventory control, and the like; and no consideration of these topics can make a pretense of completeness without taking into account the vital part which the purchasing function plays in any aspect of management dealing with the materials of industry.

It would be more accurate to say that these students of management have been led to a realization of the importance and the potentialities of purchasing through their analysis of the industrial process, which necessarily starts with procurement, and in which the cost and control of the material factor is a large item. In this respect, the experience of the Congress is closely parallel to the experience of industry itself, in which the discovery of purchasing by management is a relatively recent development. It is a slow process, but the conclusion is inevitable.

Consequently there is less cause to congratulate purchasing men at this evidence of recognition, than to congratulate management on its awakening to a factor which offers much in the way of contributing to efficient and profitable operation, in coordinating other divisions of the organization, and in establishing favorable relationships with outside concerns, whether vendor or customer.

The very able paper by F. A. Hayes, which will serve as the basis for this discussion, appears on the following pages. It is an interesting document, particularly in its straightforward development of the theme that sound economics and high ethical standards are essentially a part of good purchasing, inseparably bound in with the buyer's job. Opinion may vary widely as to the mechanics of organization and procedure best adapted to a particular industry or company, but on these basic principles there can be no divergence unless dissenters are willing to start with the premise that good management should wink at ethics and flout economic truth. It is scarcely to be expected that anyone will acknowledge such a viewpoint.

Mr. Hayes' paper is no apology; the necessity for that is long past. It is no exaggerated claim or plea for recognition or preferment beyond the natural prerogatives of the buying function; for Mr. Hayes is a practical purchasing man with a realistic conception of his job. His treatise lays a large responsibility on the purchasing official, as on the management of which the buyer is a part. His specification for personnel is an exacting one. We may expect that one of the principal questions raised will be, "Where shall we find the man with these qualifications?" In many instances, the answer is quite simple, for management has been as slow to recognize its purchasing executives as to recognize their function in the general scheme:

Management, meet your purchasing agent.

STUART F. HEINRITZ, EDITOR



F. ALBERT HAYES

General Purchasing Agent
American Hide & Leather Company, Boston
President, New England P. A. Association

CONSTRUCTIVE Purchasing Policies are part of the philosophy of management and are based on principles which consider the future as well as the immediate effect of procurement methods. They should cling to the moral code as a matter of good business.

Actually, the fact that a given management subscribes to such a statement does not guarantee that all of their procurement transactions are carried out on that basis, because, as a practical matter, they are modified to meet the competition of other firms with less ethical, or at least more flexible, buying and selling standards. This has induced buying and selling habits and procedures in the industrial firms of the United States which can be identified and grouped; first, into those characterized by lack of any policy; next, those indicated by the more or less haphazard execution of a partially formulated policy; and more infrequently, those made noteworthy by evidence of Constructive Purchasing Policies. As might be expected the latter class comprises those firms which have given great consideration to the economic and social aspects of management methods, and which therefore appreciate that purchasing not only contributes

to the potential profits of business, but that the purchasing practices of the industries of the nation have a definite effect on public welfare, because their characteristics tend to exaggerate or minimize the extent of the fluctuations and length of the business cycle.

One of the exaggerating factors is the setting up by buyers of unreasonable or unnecessary delivery requirements. These are most common when there is fear of a limited supply or a price increase, but in any event they exaggerate demand, accelerate price increases, place unnecessary pressure on production; and if the sales department, threatened by loss of business to the competitor who is held out as always being able to supply everything at once, accepts more than can be delivered, it leads to broken promises.

Broken Delivery Promises

These can be broadly divided into three groups:

- (a) Those resulting from inefficiency on the part of the supplier;
- (b) Those resulting from unnecessary delivery requirements of the buyer; and

(c) Those resulting from unreasonable delivery requirements of the buyer.

There is no excuse for group (a). Group (b) represents the uncertain and nuisance element in the delivery situation because the seller never can be sure when a buyer is really justified in demanding an "at once" delivery. It apparently has become a habit of purchasing agents to specify "Rush," "At Once," "Immediate Delivery," "As Soon As Possible," etc., and the proportion of such requests shows that there can be no justifiable basis for assuming that there is a legitimate requirement for such short delivery in every case. Group (c) must be fairly viewed from the buyer's side as well as the seller's. The buyer may have a legitimate reason for requesting the cooperation of the seller, but the seller would be in a better position to meet such demands if the unnecessary requests of Group (b) were eliminated.

It is hardly probable that the purchasing agent is entirely responsible for unnecessary or unreasonable delivery requirements as he may be the victim of inefficiency within his own organization. The buyer's planning department may be cover-

CONSTRUCTIVE PURCHASING POLICIES

ing up poor scheduling when it insists on certain delivery dates; or the management may have set inadequate stocking requirements, both in regard to raw materials and purchased parts, as well as finished stock. Thus the purchasing agent can be the center of a vicious circle of conflicting elements from within and without his company. His only escape is to pass the burden on to vendors, with the result that the seller is required and expected to make up for the inefficiency and delay of others.

As a part of unreasonable delivery specifications there must not be overlooked the demoralizing effect of the orders placed speculatively with the intent of cancellation, or forcing of a price allowance, if the market turns unfavorably to the buyer. Here again, the threat of "no future business" is made if the seller does not accede to the professed settlement.

Price

The free competitive system on which our industrial progress has been made, would not have been possible without profit. Admitting that one of the fundamental reasons for business existence today is the perpetuation of jobs, it must be axiomatic that new jobs cannot be made, or even the old ones held, unless a profit is possible. Therefore, management should expect to pay a price which represents a fair profit to the vendors. This cer-

tainly does not mean a uniform price throughout the industry, as that is the result of either government regulation, or trade restrictions which are designed to keep the most inefficient producer and distributor in business. The extent to which it occurs is a measure of regimented business, with a denial of free competition.

A uniform price signifies high cost producers kept alive at the expense of the public; and the supplying industry as a whole will suffer in time because progress inevitably will replace the product with something as good and cheaper. Theoretically, a management might inquire into the conditions underlying the production and sale of a desired article or commodity and its relation to price. A fair price results from costs based on reasonable and adequate wages for the kinds of skill required in manufacture; from the proper selection, acquisition and fabrication of materials; from good management methods; from technical control to maintain quality; from research to improve and cheapen the product; from suitable distribution methods; plus a reasonable amount for the profit necessary to perpetuate the business. Such a price must be competitive and it is unbelievable that the price of one

vendor calculated separately should be exactly the price of many other vendors.

Practically, management cannot ascertain all the surrounding factors which enter into the price making of all the commodities bought. Merely to establish the factor of "fair labor cost" involves subjects such as the "cost of living" in various parts of the country, "closed shops" versus "open shops," etc. Even to inquire about the use of union labor brings up the subject of what kind of union labor, and even labor does not now know the answer. Management is entitled, however, to desire the vendor to make a profit, without being too greatly obligated to determine the reality of the profit. If the vendor wants to quote or take the business on a certain basis, the buyer cannot be criticized for placing the business with the low bidder, provided all the other factors which go to establishing the proper selection of a vendor have been satisfied.

Turning it around, management as a matter of policy, should require a purchasing department to accept a low bid, or advance logical reasons of vendor lack of facilities, experience, finance or reputation. Equally concerned, management should regard uniform prices with suspicion. The mere fact of the commonness of uniform prices does not change their fundamental unsoundness.

Reciprocity

Shall management as a company policy entertain Reciprocity? If so, to what degree? Management viewpoints differ. The head of a national firm writes: "We regard reciprocity as an evil to be deprecated and harmful from every point

Mr. Hayes' comprehensive summary of the place of purchasing in modern industrial organization will be the basis of discussion at one of the technical sessions of the Seventh International Management Congress to be held at Washington, D. C., September 19th to 23rd. This is the first time that the Congress has convened in the United States, and is also the first time that the purchasing function has been included in the program.

of view." Another large firm states: "We do not feel that it is fair to our product to let the prospect of future purchases from us influence us to buy equipment or materials which we do not consider best for our business, either from a quality or price standpoint." There are other firms who think so well of reciprocity that the purchasing agent is a salesman, and may pride himself on the sales which his purchases render possible. A sensible attitude is expressed by a Vice President of a large firm who writes: "As one constructive policy in connection with purchasing I would suggest this, that in making purchases so conduct yourself as to induce the man from whom you buy to buy your product." That does not denote coercion, but attempt to build good will.

Reciprocity cannot be ignored in any case, but if dealt with in any other than a common sense manner, it not only will not be ignored, it will dominate the purchasing habits of a company. Under such conditions management must watch that inferior materials at high costs are not imposed on the production department by the sales department, with the procurement function entirely abrogated. If the sales department insists that a profit has been made, management should have the whole transaction examined and the excess costs, be they first costs or production costs, charged against sales to establish the facts they claim. Reciprocity can be practiced on this basis, or on the less troublesome one of always giving the vendor who buys your goods a chance at your business on the same basis as all the other vendors. If buyer's goods and vendor's goods are properly priced no complicated reciprocity sheet should be necessary. Other factors being equal, the vendor who can use the buyer's product is entitled to an equitable share of the buyer's business.

Speculation

A purchasing department is expected to maintain a safe working balance of materials so that the company is not handicapped by

delays resulting from shortages. If conditions seem to indicate the desirability of buying in considerable excess of immediate normal requirements then speculation is involved and management usually takes part in reaching the decision. If management is willing to authorize speculation, it should also be willing to segregate the results and show the profits or losses from the practice.

Administration

Management having stated its fundamental philosophy of buying, with the actuating principles, must then consider how the desired practices can be attained as an administrative function. Definition of objectives is the first requisite and is stated by Prof. H. T. Lewis of the Harvard School of Business Administration as follows:

1. To relieve the using departments of what should be for them an incidental necessity of obtaining the materials required in the operation of those departments.
 2. Through specialization, to acquire such materials more efficiently than otherwise could be done.
- Purchasing is a specialized function because of the peculiar type of knowledge and judgment necessary.
- a. To anticipate the requirements of users.
 - b. To interpret price trends and market conditions.
 - c. To locate and determine the reliability of sources.
 - d. To negotiate with vendors.

It is a major function of business not alone because of the percentage of total expense represented by these expenditures, but because of the implications which its performance has for the profits of the company, through cost reduction, quality control, pricing policies, and customer's good will. The actual duties assigned, as a matter of organization, will depend upon the peculiar circumstances affecting the individual company.

Another approach to the duties assigned is noted by Prof. Schell of the Massachusetts Institute of Technology who takes the position that anything which improves vendor relations is a part of the job of the purchasing department and conversely anything else is excluded.

The acceptance of such definitions by management of the purchasing function automatically establishes

it on an equal basis with the other major functions of production, personnel, sales and finance; and the exercise of the purchase function is delegated to a department organized for the purpose, and whose size and duties depend on the particular structure of the company and the availability of personnel.

Personnel

It is at this point management may fail by neglecting to use sufficient care in selecting personnel, with the result that the business gets an order department and not a purchasing department. Many managements might be surprised to know how little their purchasing departments have to do with the actual purchases of the company other than rubber stamping the orders. Assuming that the company thinks it has established a purchasing department, management must accept the blame for failing to arm it with a top person capable of fulfilling expectations.

Management must recognize that procurement as a centralized and delegated function is relatively new, and many production executives regard the buying of material through a purchasing department as an abrogation of their privileges and authority. Therefore, it takes a particular kind of personnel to buy, as it deals with human relations both within and without the organization, and frequently the internal relations are the more difficult to establish on a cooperative basis.

First:—A purchasing executive must be imbued with a spirit of service, as only by his complete recognition and acceptance of the fact that his function is one of service and not operating, can he expect adequately and acceptably to fulfill his destiny.

Next, he must have the incurable optimism of a master salesman with faith in the value of his profession. Of greatest importance, he should enjoy the business of barter or trade and be able and willing to meet the other fellow on his own ground.

Furthermore he should have an abounding desire not to be chained to his desk but through actual ob-

servation of the use of material purchased constantly to increase his knowledge and thereby be of greater service. The technique of purchasing for an industrial establishment is acquired through special training, experience, and the possession or development of certain natural qualifications.

A general purchasing agent should have a technical and business training to understand the use of materials and their cost. It is not sufficient to pick out an engineer or chemist, or a business school graduate with the essentials of honesty and reliability and hope for the best. As already noted and here emphasized, he should have aptitude for and enjoy business transactions as differentiated from the completely engineering attitude. He should be of a positive type, although not too obvious about it, tenacious of purpose, without being combative or over-aggressive.

He has to be a salesman of ideas to his own management and associates, not being discouraged by failure of their immediate acceptance, or ever failing to resubmit at an opportune time an idea in which he believes there is merit. Particularly should management guard against a person who because he is spending money is liable to become filled with an undue sense of his own importance, as he is a likely prey for the subtle tongue of flattery. Also guard against those who may acquire a sadistic complex and take it out on vendors, with natural harm to vendor relations.

Finally, management should not expect infallibility, as the purchasing department is human, salesmen to the contrary notwithstanding. It is unlikely that such a paragon can be found, and even if found he still needs the backing of management to render its policies effective. Perhaps the difficulty of finding the right personnel explains why so many purchasing departments are order departments, but frequently the blame can be placed squarely on managements which are unwilling to pay the price for securing and keeping purchase executives who are qualified to meet and deal with

other major executives. A clerk vested with the title of Purchasing Agent and expected to execute company policies is at some disadvantage in dealing with the requirements of a productive executive getting ten to twenty times his annual stipend.

Many firms realize the importance of adequate personnel—as evidenced by the policy of a national company that writes as follows: "One member of the staff (which is composed of our most experienced functional executives, who were relieved of their operating responsibilities and moved behind the lines so that they could see things in perspective, study reports, trends, budgets, etc.) was our most experienced purchasing agent. He does no purchasing now, but consults and advises with the staff, advises control management and also consults and advises with the general manager of each division and their purchasing departments. We think, with free time for study, that he secures a broader outlook and can watch broad trends better than the busy purchasing agents, who have to purchase world market products such as rubber and cotton, as well as domestic supplies, and cannot spend much time on the study of trends."

The Viewpoint of the Purchasing Department

The Purchasing Department having been charged by management with the execution of Constructive Purchasing Policies, must set up a suitable procedure and orient itself with relation to management, the surrounding departments, the vendors and the public. Responsibilities, of which it must be wholly aware, have been assumed; and equally true, there are prerogatives which it must exercise, and in which it must be maintained by management in order to fulfill its obligations to the many elements it serves.

Responsibilities to Management

LOYALTY

As a matter of loyalty to his company from whom the purchasing

agent draws his subsistence he should "consider first the interest of his company in all transactions and carry out and believe in its established policies."¹ Obviously no buyer is going to hold his job unless he conforms to company rules and policies. If there are some parts of a company policy with which he finds himself unable to fully agree, then he has created a job for himself as a salesman, a salesman of an idea to his own management, an idea that means money to his firm, because of better vendor relationships secured by modification or replacement of the repugnant policy. If an essential part of a successful purchasing procedure is involved, then the purchasing agent has a duty to bring the fact to the attention of the management in a positive way at appropriate times.

GROWTH

A further obligation to management is "to strive consistently for knowledge of the materials and process of manufacture, and to establish practical methods for the conduct of his office."¹ Too many alleged purchasing departments know too little about the materials and their use in their own manufacturing process and even less about outside materials and manufacturing processes. It is the main reason why vendors dislike to deal with purchasing departments, and their complaint is understandable. Unfortunately, vendors, because of their experience with buyers who lacked information necessary to properly conduct negotiations, are likely to class all purchasing departments as something to be avoided. Good procedure is a part of the routine, but it must be realized that any system, no matter how completely documented, will not of itself accomplish anything. It requires actuation and interpretation by people—by people who are constantly striving to know more about their profession, their own manufacture, and subjects which will let them be of greater service to the varied group they

Continued on page 46



P. A.: *Have you any new reasons why I should buy from you?*

Salesman: *And how! I'm working my son's way through college this year.*

SILHOUETTE STUDIES

30: William Thomas Hall

FIVE THOUSAND purchasing men affectionately know him as "Pop"; and that fact alone tells more about the man in one syllable than could be achieved by pages of detailed exposition. Unspectacular and unassuming, he is intensely human, genuinely interested in this lively world and in those who share it with him, ready to go at a moment's notice, whether for sheer fun or to do his part in the serious business of life. Simple and forthright by nature, he has never been troubled by overweening ambition or delusions of grandeur. He is not one to indulge in self-appraisal from the standpoint of position or ferment. If he did so, he would be the last to claim or even to recognize any factor of preeminence among his fellows. The rest of us may be permitted to differ with him somewhat on that subject. For because he has given much and demanded little, he has been richly rewarded in the friendships made and deepened over the course of a long and active career, and has won a type of success and satisfaction in life that gives the lie direct to those cynics who would picture business as a joyless, grinding, soul-destroying routine.

To the newer generation of purchasers, Pop is inseparably related to association work. That is also true of the old-timers, but for a different reason. For Hall was a buyer—and a good buyer—for nearly a quarter century before the idea of a purchasing agents' association took root. Being naturally cooperative, he was actively interested from the start, and served as treasurer of N.A.P.A. in the second year of its existence, when the annual budget reached the staggering sum of five hundred and sixty dollars. But for the next ten years he was a worker in the ranks. It was not until 1928, when a merger abruptly separated him from his

commercial connection, that the Association enlisted his services as Assistant Secretary.

For the past ten years he has been competently working at headquarters. In the official family of N.A.P.A., he makes no pretense of administrative influence or policy determination. His job concerns the practical everyday side of purchasing, helping the member who has a knotty problem regarding materials or sources of supply. There are many such problems. His daily mail comes from every section of this country and of Canada; the largest and most influential concerns on the roster of "blue ribbon" industries are glad to turn to him for help when their own resources have been exhausted. He has an excellent record in unravelling those problems and finding the answers. In part that is due to his experience, his ingenuity, and persevering research; in large part, too, it is due to the fact a wide, intimate and cordial acquaintanceship generally enables him to single out the man who has already met and solved the difficulty, and is glad to pass along the information. There is plenty of evidence to show that this service is highly prized and appreciated. Pop gets a double satisfaction—from finding the answer, and from helping out some one who needs it.

HALL STARTED LIFE as a small town boy, back in the horse-and-buggy days when the Judge and Doctor informally raced their trotters on the Main Street of his native Greenfield, Mass., every Saturday morning. It was a democratic, self-reliant community. Among the two thousand inhabitants there were none very rich, none very poor. Industry and trade were simple affairs. At his father's general store, a considerable portion of the business consisted of bartering merchandise for farm produce.

Family ties were shattered by the death of the mother he never knew, and he was brought up in the family of a neighbor, Joel Wilson. Early boyhood was normal, healthful, happy. The eager, wiry little youngster won a place for himself in the placid life of the town, where his native shrewdness and irrepressible spirit of fun earned for him the nickname of "Coony"—the colloquial equivalent of "Foxy."

Then in his early teens the even tenor of life was rudely shaken as the Hall family was reunited and moved to Cambridge for a larger mercantile venture in the form of a partnership and a store at Harvard Square. Wrenched from familiar surroundings and from the close personal ties of his adopted home, the boy was subjected to a profound emotional disturbance. Active, as always, he started high school, helped at the store, and found time to play at second base for the Cambridge Red Stockings, one of the crack amateur nines of the day. (Incidentally, the catcher on that club was Dick Gushée, who has since attained eminence in the Episcopalian ministry and has contributed a brilliant son to purchasing in the person of Detroit Edison's Ed Gushée.) But despite this busy round, there was a void in the youngster's life. He missed the sympathetic understanding and companionship that he craved, and when, after months of conscientious effort, he was unable to make that adjustment, he determined to strike out for himself and carve an independent life.

He left school and got a job as office boy in the large wholesale grocery firm of Thomas Dana & Company, walking back and forth to Boston each day and putting in ten hours a day, six days a week, for a salary of \$2.50 weekly, which was gradually raised to \$8 as he took over more responsible work in the

billing department. On this modest income, he began to accumulate a little stake in the savings bank against the day when a larger opportunity might beckon.

THOMAS DANA'S customers came to the offices from far and wide. Among them, one spring day in the early '80s, came N. P. Clarke, a hard-bitten empire builder of the great northwest. Out at St. Cloud, Minn., the firm of Clarke & McClure worked vast lumber interests, operated a stage coach line, served as bankers for a wide territory, dabbled in government contracts, and ran a large stock farm with a national reputation for its prize herd of shorthorn cattle, its Clyde draft horses, and Hambletonian trotters. The youthful billing clerk, not yet turned seventeen, overheard Mr. Clarke mention to one of the partners that he would like to find a bright young man to come out and work for him. Hall promptly slid down from his stool and volunteered for the job. His proposal was greeted with undisguised hilarity, but he persisted in his purpose, haunting Clarke's hotel until the westerner finally took him seriously and told him to get ready for the trip.

When he announced his decision at home, there was more incredulity, but the family neither encouraged nor opposed his plan. He invested his savings in a one-way ticket to independence and set out on the great adventure.

The next three and a half years Hall spent in Minnesota, finding himself through a series of varied undertakings, footloose and free from personal responsibilities and restraint. He stayed with Clarke & McClure about a year, keeping the herd books and spending half of his time in the saddle, bringing in the steers that were constantly being bought to build up the herd. Less than three months on the job, he astonished his employer by flatly refusing to work on the 4th of July, and emphasized his point by stretching the holiday into a three-day excursion to Minneapolis. The tsars of the northwestern empire weren't

used to such insubordination, but Hall made it a matter of principle and got away with it, enhancing his employers' respect for him in the bargain. However, he couldn't reconcile his New England conscience with some of the arbitrary tactics that were accepted as a matter of course in the exploitation and development of the vast frontier, and presently decided not to be a part of it any longer. Back in Minneapolis, he worked successively as a clerk in a railroad yard, in a wholesale lumber company, and as night operator for the telephone company, sleeping on a cot next to the central office on the top floor of the City Hall.

The sincerity of his conscientious business scruples was attested by the fact that he did not excuse himself from strict observance of the code. In a somewhat Quixotic gesture, he gave up a promising job in the lumber company. Exceedingly fond of playing pool and billiards, he thoughtlessly took advantage of his employer's absence on a business trip to indulge in the game on company time. Even though his records were accurately kept and up to date, it occurred to him later that there was an element of dishonesty in the practice, so he went ingenuously to his employer on the latter's return and admitted his shortcoming. Under the circumstances it seemed to him only proper to tender his resignation, which was accepted, probably for the good of the young man's soul rather than any other reason.

He had progressed from night operator to collector and then to assistant cashier for the telephone company, when a letter from his sister persuaded him to come back east. She was then living in Brooklyn, in the home of an uncle, and eloquently deplored the many miles which separated her brother from the rest of the family. He accepted the argument, nonchalantly resigned from his job, and came to New York with only a bag of doughnuts for his sustenance on the way, a more or less seasoned young businessman, with a lot of experience under his belt and a lot of the wanderlust out of his system.

FROM THIS POINT on, there was a new stability in his life. He worked for a time as cashier at the storage warehouse of C. B. Lockwood & Company, where sailing vessels brought their cargoes of licorice, coconut oil, cotton and plumbago from distant ports. Then came the start of another business association which endured for thirty-eight years, as purchasing agent, and later as secretary-treasurer, of Brewster & Company.

In the Brewster factory, at 47th Street and Broadway where the Strand Theater now stands, carriage building was a fine art. The company served a patrician clientele that embraced not only New York's Fifth Avenue elite, but extended into every city and town where a smartly stepping team and a flawless rig constituted the accepted badge of affluence. Half way round the world, from far-off Russia and Australia came the demand for this superlative custom-built equipment. Standards of quality and workmanship were of the highest. Those same standards carried over when the plant was later moved to Long Island City, and when the company commenced to manufacture the Brewster automobile as the business changed to meet changing times.

Everyone in the organization took a personal pride in the excellence of their product. Pop can still get lyrical about it, and to meet an ancient Brewster carriage, long exiled from New York avenues but still giving genteel service in Bermuda, is like meeting an old friend. There was something about the thoroughgoing honesty of construction and finish, the enduring quality and service, that appealed to his sense of the fitness of things. To be sure, it made the purchasing job rather an exacting assignment with the responsibility of maintaining those quality standards, but he liked that too. When his thrifty nature was occasionally appalled at the cost of perfection and the prices at which the carriages and cars were sold, he reassured himself by remembering that this was distinctly a luxury business and that the cus-

Continued on page 45



Photo by Ewing Galloway

How COTTON Is Marketed

FRANCIS A. WESTBROOK

COTTON IS THE LARGEST agricultural crop, from the money standpoint, in this country. It is also the largest world crop. In 1936, the United States accounted for about 40% of the world's production; in earlier years it has been as much as 60%.

In this country, it is grown on something like 1,600,000 farms in the "Cotton Belt," and this belt covers an enormous territory. It stretches some 2,500 miles from the Atlantic coast of the southern states to eastern New Mexico and southern California, and about 700 miles from the southern tip of Texas to the northern boundary of that state and of Oklahoma. This of course embraces the coastal lowlands, river valleys, and uplands, in which a great variety of climatic and other growing conditions are found.

The large number of farms further means that the average amount

of cotton produced per grower is small. In 1936 this average was about $7\frac{1}{2}$ bales, of something under 500 pounds per bale, per farm. There are a few which produce several thousands of bales, but many more whose total output is only four or five. Three-fourths of the growers, many of them negroes, are tenant farmers or "share croppers," who pay rent by giving their landlords a certain share of the crop, the amount depending on what is agreed between the two. In the majority of cases, the landlord gets half, for which he furnishes the land and farmhouse, the mules or horses for doing the heavy work, the seed, and half the cost of the fertilizer and of ginning the crop.

The size of the crop varies greatly from year to year, not only through a variation of the acreage which may be planted to cotton, but because of natural causes which are largely beyond human control.

Chief among these are the prevailing weather conditions over a growing season, and insect pests such as the boll weevil. The latter has been subjected to a considerable measure of control, but its ravages often do irreparable damage before corrective measures can be applied.

The large territory covered by the Cotton Belt, with its diverse weather conditions, tends to average the favorable and adverse factors, for while conditions may be poor in one section they may be exceptionally good in another distant section. The large number of farms also tends toward creating an average, for while some growers may be very expert, others are not so proficient.

On the other hand, these same divergent elements make it difficult to forecast the oncoming crop accurately, and the variation from season to season may amount to millions of bales. Consequently—for the price of cotton naturally de-

pends in large measure on the probable volume of supply—the progress of the crop is watched very carefully throughout the season. The plant is a hardy one; growing conditions may be so very poor that it may look at one time as though the crop would be small, even a failure, and then much needed rains will come along resulting in very good production. Conversely, a crop may appear to be progressing most favorably, when some sort of a blight will develop, or the season may turn too dry or too wet, and what at one time appeared to be a good oncoming crop will degenerate into a poor one. It is not unusual to have two or three ups and downs like this during a single growing season, so that the interested buyer of this commodity is kept in uncertainty. The effect of such fluctuations on price is frequently more pronounced in one grade more than another, depending on the nature of the case.

To get an accurate idea of conditions over this wide territory, and on so many farms, the U. S. Department of Agriculture has established a special service. The Weather Bureau maintains about 250 stations in the Cotton Belt, and issues daily reports from the 1st of April, which is the time when plant-

ing normally gets under way, until the close of the season. Later in the season there are weekly summaries of the weather conditions and forecasts for the coming week. Also, in the early spring, the Department of Agriculture issues a report of the intentions of the farmers in regard to the acreage to be planted. These two factors make possible a tentative estimate of what the crop is likely to be. During the first week of July, the Department reports its first official estimate of the acreage actually planted, and a month later reports on the condition of the crop, making an estimate of prospective production. Similar estimates, revised in accordance with later information, are issued monthly thereafter until the harvest is complete.

The Department of Commerce also issues reports of the amount of cotton ginned, beginning August 1st. During all this time, many private agencies—including cotton firms, trade papers, and organizations specifically devoted to this purpose—are making estimates of their own through their contacts in the Cotton Belt. These reports have a distinct bearing on market fluctuations between the issuance of the government reports, but the latter are regarded as official and

have an excellent record of accuracy over many years.

When the grower harvests his crop, he usually takes it direct to the local ginning plant, and usually, though not always, sells his bales as soon as they are ginned. The buyer may be a local store keeper or trader, or the representative of a cotton merchant. These markets are the primary or "country" markets. These primary buyers take a sample from each bale offered for sale, to determine the quality and length of the fiber or staple, and base their offer on the current price quotation for that particular grade of product. They keep in touch with market quotations by wire, so that the telegraph office in these market towns is a busy place during the season. Some of the buyers are growers' cooperative associations, and many southern mills buy direct from the growers.

In addition to the country markets there are central markets. These are fewer in number, and are located in the larger cities. This is where the merchants who buy from local dealers or growers in the country markets sell to the spinners. Some of the cotton bought in the country markets is actually taken to the central markets and



In hundreds of small towns throughout the Cotton Belt, individual growers bring their crop to the local gin, first step in the marketing process—

(Photos by Galloway)

This is the first article in a series outlining the marketing process in major raw materials, tracing the course of the material from its source to the time of its arrival in the industrial user's plant.

stored there until delivered to a customer, but the great bulk of the crop may be shipped direct to the spinners from the country markets without ever going near the central market, although it is bought and sold in the latter.

In the central markets are also to be found "spot brokers" who sell for the country markets to spinners on a commission basis. This selling is mostly done from samples. There are, in addition, "futures brokers" who represent firms holding membership in the Future Delivery Exchanges, such as the New York Cotton Exchange. Finally, there are the factors, who make loans to the growers or in the country markets to finance the holding of crops and then sell, on commission, the cotton which they have financed.

In the larger central market cities there is generally a cotton exchange, which is an association of those engaged in the cotton business in that locality. Their main purpose, in

most cases, is to facilitate the mechanics of trading, to provide statistics on prices and volume of business, and to furnish a meeting place for those engaged in buying and selling. Actual buying and selling takes place in these exchanges only incidentally, when the right people happen to meet there, but this is not a function of the exchange. They are known as "Spot Exchanges."

A third type of market is the mill market, found in the southern states and in New England, where the mills are located. This is where the buyers for the mills get together with the sellers. Among the sellers are the cotton merchants and the spot brokers who sell on commission for shippers in the Cotton Belt. In New England the term "cotton broker" is prevalent. These are not necessarily brokers in the true sense of the word, but rather dealers in cotton who actually buy from southern shippers and sell to the mills, operating usually with a quick

turnover and a small margin of profit. They are not full-fledged merchants in that they do not carry a stock from which deliveries are made to customers, for as a rule they do not buy from the shippers until they have made a sale to the mill, although they generally have an understanding with the shipper as to the price of the cotton they will have to buy to complete the contract. The majority of industrial purchases are made in the mill markets, except in the case of some southern mills that buy directly from the growers or in the country markets.

The three types of markets described above are all known as "spot" markets. They are actually distributive markets for cotton. Then there are the "futures" markets, located in New York, New Orleans, and Chicago, which are price insurance markets for those who buy and sell for the mills, and speculative markets so far as the public is concerned. In these exchanges the public buys contracts for the future delivery of cotton with the hope, or belief, that it may be sold later at a higher price, or sells such contracts in the belief that the cotton may be procured later on at a lower level.

while in the great cities are the busy Cotton Exchanges where buyers and sellers bargain for the staple which they rarely see.



In these markets, the industrial buyer "hedges" his commitments to protect himself against loss while keeping his mill supplied for current operations. If a mill purchaser buys cotton to fill an order placed on the basis of the current price, he is of course protected provided he buys immediately. But the purchaser of the goods is not so protected, because if the raw material should drop in price before he can dispose of the goods (and the prices of manufactured goods rise and fall in wholesale and retail markets somewhat according to the changes in raw cotton prices) he may suffer a loss. So he too is likely to protect himself by hedging.

If the mill buyer purchases a quantity of cotton for manufacturing purposes, especially if the goods are to be manufactured for stock, he faces the possibility of loss in the event of a price decline. If he sells futures for the same amount of cotton that he buys, at the same price, he can buy it back for the lower price if it goes down and so protect himself against that loss. If the price happens to go up during this interval, he will have to buy at the higher price to make delivery, but the increase will be reflected in the higher value of his finished goods, thus making up a substantial part of the difference.

In considering the functioning of the futures exchanges, it should be borne in mind that cotton is a world commodity, and that its prices are controlled by world conditions and by operations carried on by many individuals, which vary at different seasons. The blanket manufacturer, for example, buys his raw material and manufactures for fall delivery. The summer goods manufacturer buys and produces for spring delivery. Consequently the former will be selling futures when the latter is buying them, and the speculating public is not by any means carrying all the insurance for the mills and dealers in raw and finished goods. The price fluctuations are spread out and absorbed by the great diversity of requirements of those in business throughout the world, and the industrial

buyer who consistently hedges his purchases is actually seeking this sort of protection, and stands neither to gain nor to lose by his transactions on the exchange.

In the parlance of the cotton trade, "spot" has two meanings. In one sense it means cotton actually located at a specified point, city, or town, and in the other sense it means cotton that has been purchased for delivery at a future date but not on a futures exchange. Thus spot may be purchased and paid for and the transaction closed when a mill sells an order at an agreed price for the finished goods. Or, if the mill manufactures for stock, it can buy spot cotton at a price agreed upon on a certain "basis" with the broker. In this case the hedging is transferred to the seller, or broker. Such a "basis" may be a specified number of points above or below (according to crop prospects) the futures quotation at the time the purchase contract is made.

There have been a number of other recent influences affecting the cotton market. The Federal government has taken a hand in restricting the acreage planted to cotton, and has made loans to growers to finance the holding of all or a part of their crop, and has held large quantities itself, all of which activity has tended to "peg" the price temporarily at least, and has made it necessary for purchasers to keep an eye on Washington.

There should also be noted the operations of the cooperatives, with their "seasonal pools" and "optional pools." Originally their objective was to keep up prices by keeping control of the crop, but that hope was futile since this country produces only a part of the world's supply, not large enough to control the price. The best that such associations have been able to do for the growers has been to help hold the cotton for the most favorable market price. For such selling, the "seasonal pool" was created. The "optional pool" is made up of the cotton belonging to members who reserve the right to tell the association when to sell it.

Thus far, cotton markets have been considered only in terms of price. But cotton varies greatly as to length of fiber, color, and character, and there are numerous varieties of the plant itself. Three of these varieties are produced domestically—upland, long staple upland, and American-Egyptian. Sea Island cotton is grown only to a negligible extent in this country.

The short staple upland, with fibers under $1\frac{1}{8}$ inches in length, is the type most widely produced. It is suitable for coarse and medium yarns. The long staple upland has a fiber length from $1\frac{1}{8}$ to $1\frac{3}{8}$ inches. American-Egyptian has fibers averaging $1\frac{5}{8}$ inches, and is used for automobile tire fabrics, among other uses. The largest proportion of American cotton, known as "bread and butter" cotton, is in the $\frac{7}{8}$ -inch class. The New York Cotton Exchange deals only in middling $\frac{7}{8}$ s, and differences in grades are established by the sales on the spot markets in the south.

The U. S. Department of Agriculture has set up official standards covering the grades and colors, based on standard samples held for comparison. In the primary markets there is little uniformity of grades in the various bales, and it is a highly skilled operation to assemble the bales according to proper grading and to secure sufficient uniformity for efficient machine operations in the later manufacturing processes. To a certain extent there is interchangeability among the grades for certain uses, which tends to check any wide differential arising from overproduction or underproduction of any one particular grade. However, the premium on $1\frac{1}{4}$ -inch staple went from two cents to almost fifteen cents between 1924 and 1925.

The supply of cotton which determines price is, for the entire world, the total of that which is carried over from the previous year, plus the crop of the current year, plus the estimated size of the oncoming crop. The first two constitute the cotton which is actually in existence, or spot cotton. In the

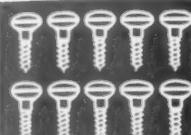
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DOES WHAT YOU PAY FOR SCREWS

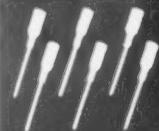
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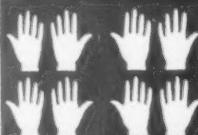
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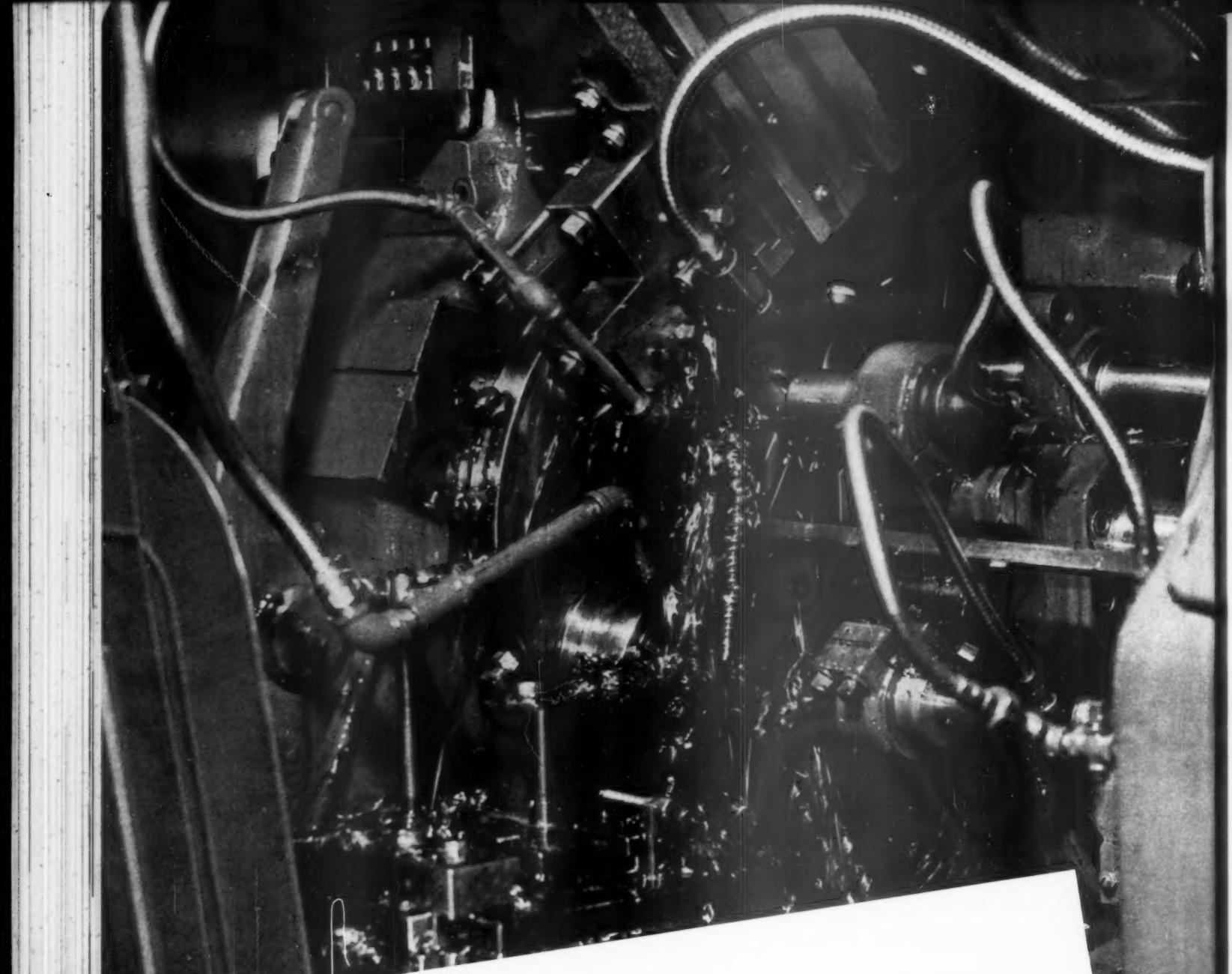
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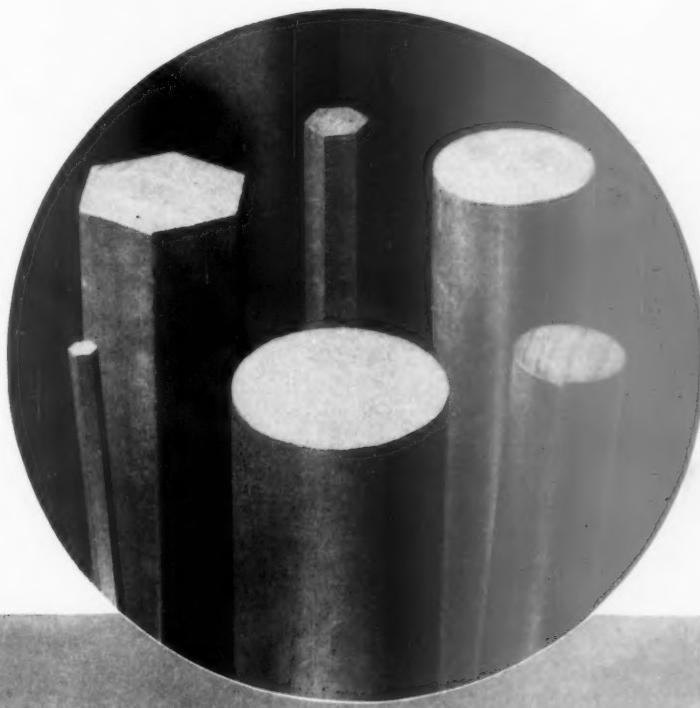
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COST REDUCTION—

the Purchasing Agent's Contribution

*New horizons in economic thinking
stress the buyer's responsibility
and call for greater vision on the
part of management and purchasing
executives*

IT HAS BEEN said the future of America lies in industry's ability to produce goods at lower costs so that more people can reap the benefits. Engineers and scientists spend thousands of hours and millions of dollars looking for new processes or trying to improve old ones. Many concerns have set up Cost Reduction Departments whose chief function it is to study methods of reducing the cost of manufacturing.

One axiom in purchasing reads somewhat as follows: "Procure at lowest price, at time specified, from reliable source, the exact material specified on the requisition."

In past years the purchasing agent was looked upon as the fellow who beat the seller down to cost and then offered him 10% less. Except for occasional lots of distress merchandise, most purchasing agents understand that the seller is entitled to a profit and act accordingly. Modern purchasing has caught the spirit of the times and purchasing agents now adopt a program of cost reduction that has for its theme: "Lower costs for quality products by proper substitution of less expensive material offered in cooperation with the supplier."

To accomplish this, the purchasing agent must not only analyze various proposals brought to him by the vendor but must go out and dig for facts in other fields. Many savings are due to the shopping in fields that may have, to date, remained unexplored, or which have not been visited in years.

The metal fabricator who could not handle your work five years ago may be able to do so now. True, he should come to you, but it just does not work that way.

The purchasing officer is sometimes able through the combined knowledge of his own requirements and the vendor's method of manufacture, to offer constructive suggestions that will lead to cost reduction.

Today when a requisition calls for bronze, the purchasing agent is likely to search for a reason why aluminum or stainless steel will not do the job equally well at less cost.

It is true the purchasing agent cannot be expected to know everything about the materials he buys. However, he is expected to act as a clearing house for the vast number of ideas that flow to the company from outside sources.

This function is one of the most important that the purchasing agent has to perform and one of the most difficult. Results are hard to measure and it is possible many good ideas may be lost if the purchasing agent fails to examine every prospect. Most companies recognize this fact and have a standing rule that everyone having legitimate business be given an interview.

D. H. LYONS

At this point it might be appropriate to mention there would probably be a better understanding among purchasing agents and salesmen if the salesmen would try to see the buyer's point of view. We have already admitted the purchasing agent doesn't profess to know everything. By the same token it is felt the purchasing agent is in better position to know the needs of his company than the fellow across the desk. If the seller will recognize this fact and retire gracefully after he has been granted a respectful and attentive interview, time and effort will be saved by both sides. Persistence is a virtue, but the seller should save it for the prospect who he knows might have a use for his product. Do not waste it on the fellow who because of certain circumstances cannot consider the product's use.

One way for the purchasing agent to discover means of cost reduction is to secure samples of merchandise for test. Again he must use discretion, as testing takes time and money. It is not good economics to spend one hundred dollars testing something if the most you could save would be fifty dollars a year. Many concerns use the same laboratory for research and develop-



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ment and for testing materials. The former will suffer if the time of this division is taken up testing a large group of miscellaneous items.

Another approach can be made through a study of the industries serving the purchasing agent's employer. For example, consider the following incident which occurred during the development of a carton for a new product. The vendor who submitted the most promising samples was called in to make a further study of the problem and submit final samples for test. Through some error, the supplier in making the final sample used a liner board left over from a previous job that was not considered standard by vendors in that section of the country. The samples were approved and the purchasing agent was asked to assemble costs. In reading the specifications he noticed the special liner and decided to ask for an alternate in addition to that which was specified. As was expected, the alternate prices were lower, including the original vendor's bid. The latter quickly admitted the

error and assured the buyer the standard material would do the job just as well. Being competitive and having lent much assistance, he got the order.

The point is that the purchasing agent might not have noticed the discrepancy. The vendors perhaps would not have brought it up, on the assumption the buyer specified the special liner for good and sufficient reasons.

Through study and analysis the purchasing officer has been able to contribute, at least in a small way, cost reducing ideas that make it possible to buy an excellent motor car for less than a thousand dollars.

Today, however, he is faced with bigger fields to conquer. He often assumes the role of "Inquiring Reporter." You would expect him to ask, "Have you ever stopped to consider the length of that cigarette you are smoking? Quick, how long is it? How many thousands of dollars could be saved if it were made just one eighth of an inch shorter? Where is the man who can make a cigarette cheaper by

leaving the tobacco out of the end you throw away?"

The purchasing agent will often ask why 20 gauge steel will not do in place of 18 gauge, or why paper tape cannot replace cloth. True, in many cases change is not practical. However, there will be times when the suggestion will be adopted, and at a saving.

It has been said the purchasing department is the last outpost through which company funds flow. To this we may add that the purchasing agent is also a medium whereby money is kept in the till by means of cost reduction. It is difficult for the purchasing agent to demonstrate in all cases that a penny saved is a penny earned. However he does recognize that his main purpose in life is to carry on buying materials at prices that will help keep his company competitive. That places upon him the responsibility to search for cost reduction possibilities, knowing that each contribution will eventually be reflected in a better standard of living for Americans.

THE MARKET PLACE



Supply

BURLAP

SHIPMENTS FROM Calcutta to North American ports registered another heavy increase in July, amounting to 115.4 million yards. This is 50% ahead of June and three times as great as the volume of earlier months. While July normally shows a seasonal increase the gain was unexpectedly large, being ahead of the corresponding figure for 1937 for the first time this year. Shipments to South America also reached a new high. Stocks at Calcutta are considerably relieved. U. S. stocks of 333 million yards, spot and afloat, represent about six months supply.

COAL

OUTPUT OF BITUMINOUS coal continued to expand during August, though showing less than a normal seasonal increase. From a rate of 5,900,000 tons at the end of July, production increased to 6,050,000 tons at mid-month and to 6,375,000 tons in the closing week. Total output for the first eight months was 199,667,000 tons, or 20½% under the 1937 figure. Industrial stock piles were further reduced during the month. Dumpings at Lake ports were heavier in August but are about 36% below last season.

COPPER

AUGUST 1 STATISTICS showed more clearly the effect of the lower production rates instituted in the second quarter, emphasized by a better volume of deliveries in the past three months. World stocks of refined copper were down 28,299 tons in July to 523,196, the lowest since January; blister stocks down 11,707 tons. U. S. refined stocks were down 19,001 tons, blister stocks down 4,292 tons. While some reduction had been expected, the predictions were far short of the actual accomplishment. There was a moderate expansion of domestic producing operations, but held well within the capacity of the market to absorb the additional output.

A quick review of the market noting major developments in supply, demand and prices of selected basic commodities

Demand

JULY CONSUMPTION FIGURES for the U. S. showed 48 million yards going into production, a decline of 4% from the June figures, and more than 20 million yards short of last year's high consumption. So far, the year has shown a steady decline in use, but an improvement for the second half is still anticipated. In view of ample stocks, demand is of a listless and routine nature.



INDUSTRIAL FUEL CONSUMPTION is expanding, the trend being definitely though moderately upward. Purchasing generally has been of a cautious nature and there has been no noticeable tendency to replenish stock piles. With prices easy, demand is still limited by the general pace of industrial activity and buying is correspondingly routine.



AFTER THREE MONTHS of heavy buying, which culminated in the 122,800 ton figure of July, August tonnage sales dropped abruptly to 23,195, two-thirds of which was for November delivery. Current shipments, however, were in excellent volume, specifications for August delivery being reported as highly satisfactory and indicating that even the present very substantial commitments represent no excessive coverage. The foreign demand was well sustained, with Japan appearing as a heavy buyer.

Market

PRICES SAGGED STEADILY throughout August, and by the end of the month July's gains had been practically lost. The spot list was down 10 to 15 points, and forward positions showed an even greater decline. A stronger jute market firmed the quotations at Calcutta toward the middle of the month, but domestic prices were unaffected, and in the absence of any substantial market support this advantage was quickly dissipated.

QUOTATIONS WENT ALONG an even course for the most part, the industrial market being on the weak side. The exception was on Pennsylvania low volatile for New England shipment, which firmed materially in the latter half of the month. The Bituminous Coal Commission is making some progress toward the filing of proposed minimum prices and marketing regulations, and hopes to have the first step completed by the middle of September.

THE DOMESTIC COPPER price of 10½ cents, which went into effect in the closing week of July, held through August without change. The more sensitive European price fluctuated rather widely. Opening the month at 10.35 to 10.40, it sagged below 10 cents at the middle of the month, recovered briefly to 10.30, and closed at about 10.10. Leading producers have ratified a new and higher wage scale for mine and smelter operators, the contract extending to June 30, 1940. It is based on a minimum market of 9 cents for copper, with automatic increases whenever the market goes above 10 cents.

Supply

COTTON

THE AUGUST ESTIMATE of the Government's Crop Reporting Board forecast a cotton crop of 11,988,000 bales, substantially higher than the estimate of a month earlier. This calculation is based on an indicated yield of 217.9 pounds per acre, 19% under last year's record yield but otherwise the highest in forty years, reflecting the widespread abandonment of marginal acreage as well as an excellent growing season. Later estimates showed a further increase.

IRON and STEEL

THE INCREASE IN THE rate of steel ingot production continued strongly during August. At the middle of the month, activity was above 40% for the first time this year, and in the latter half of the month the rate was carried up to 43.5%. While statistics for the Labor Day week show unfavorably, being calculated on a weekly basis, the daily rate was up still further. Progress was somewhat uneven as among the various producing areas. The operating rate is now running ahead of current consumer requirements and stocks are building up at the mills, offsetting a sharp recession in consumer inventories and anticipating a heavier demand as the industrial pick-up gathers momentum.

LUMBER

OUTPUT OF LUMBER reached a new high level for the year in early August, at 68% of the 1929 weekly average, then dropped slightly, though still well ahead of previous months. Shipments were also in good volume. Western yard stocks are being replenished, but inventories are low in the east.

NAVAL STORES

SUPPLIES OF NAVAL STORES at southern markets continued to pile up during August. Turpentine stocks increased by more than 13% to 83,514 barrels, and rosin stocks were up 16½% to 416,581 barrels during the month. Government holdings on Commodity Credit Corporation loans are estimated at 110,000 barrels, mostly turpentine. Consumers' inventories are very light, with no apparent tendency to build up stocks.

Demand

BUYING OF COTTON GRAY goods was steady but cautious during the greater part of the month. There was a sudden expansion of trade in the closing week as mail order houses and chain stores placed fall orders for finished goods. Broadening demand for industrial constructions is also expected to sustain the demand.



DEMAND IS WELL DIVERSIFIED, with automobile items and fabricated structurals leading the way in a broadening market. Railway purchases, both rails and cars, are beginning to appear. Galvanized sheets are more active. With the exception of structurals, light steel has shown the most favorable development of demand. The greatest potential outlets are looked for in tin plate and the automotive field.



DOMESTIC DEMAND FOR BOTH turpentine and rosin continued in abnormally small volume, and trading was desultory in the extreme. Export demand was also strictly on a routine basis.

Market

COTTON PRICES, BOTH on the raw staple and finished textiles, lost ground in August. The government loan level of 8.268 is regarded in the trade as disastrous, since it fails to cover all grades and tends to set that figure as a ceiling for prices, strengthening the position of foreign producers in the competition for world markets. Prices promptly broke below that level and fell to 8.05 cents by the end of the month.

ONE SOUTHERN PRODUCER HAS affirmed prices for the fourth quarter, which may be the indication of general policy throughout the industry. Several items have not yet been adjusted to the recent downward revision of prices. These include tin plate and standard rails, and considerable pressure for a reduction may develop in both of these fields, particularly in view of the fact that light rails have already been reduced. With the exception of some concessions on nails, the current schedule is well maintained. The scrap market was softer in August, but recovered strongly under the influence of improved demand and scarce supplies. No. 1 Heavy Melting Steel went to \$15.00-\$15.50 per ton in the Pittsburgh district.

LUMBER PRICES FIRMED generally in August. Southern pine was off to \$19.25 in the first half of the month, but recovered to \$19.53 for the second half and went to \$20.53 at the end of the month for a net gain of 4½%. Hardwood quotations are unchanged.

TURPENTINE PRICES DECLINED during August for a net loss of ¾-cent per gallon. The rosin list was also off about 60 cents per barrel for medium grades, the decline being less pronounced in the finer grades. The government loan program has been extended by an additional grant of three million dollars, bringing the total now to ten millions. This action had no effect on the market.

Supply

PAPER

PAPER PRODUCTION IN AUGUST held fairly steady at the higher levels established during the July advance. Paperboard activity was strongly up. Scandinavian producers have announced a curtailment of pulp over the balance of the year and the Canadian cut is about 25% less than last year, when many mills overbought.

PETROLEUM

PRODUCTION OF CRUDE OIL increased sharply during August to a weekly average of 3,376,425 barrels and was only slightly under that rate at the close of the month. The greatest increases were reported from California and Oklahoma. Refinery runs also mounted, reaching a daily average of 3,310,000 barrels. Despite a more favorable report in the closing week, heavy supplies of crude, fuel oil and gasoline are of grave concern to the industry. Large stocks of fuel oil are held at Atlantic ports.

RUBBER

THE RUBBER RESTRICTION accord has been extended for another 5-year period, running through 1943, with some modifications. The basic quota is fixed at 1,449,000 tons for 1939, and gradually increases to 1,491,000 tons in 1942. An acreage increase of 5% is permitted within the next two years, besides replanting of old acreage as at present, and estate stocks are liberalized to 25% of standard production instead of 20%. July exports of 68,715 tons were 20,160 tons over permissible shipments and picked up the greater part of the undershipments of the first half year.

TIN

THE WORLD'S VISIBLE SUPPLY of tin was up 393 tons in August to 21,688, the highest figure in several years, and competent surmise points to a very large invisible supply as well, more than ample in the light of currently small demand. August deliveries to the U. S. were 3,775 tons, the same as July's low total.

ZINC

SURPLUS STOCKS OF SLAB zinc continue at record levels; production rates continue low. Ore production expanded further in August, to a weekly rate of 7,660 tons.

Demand

DEMAND FOR MOST PAPER grades was seasonally low in August, but indications of an early fall recovery in general lines developed a good inquiry for kraft and boards. Business in pulp continues light.



DEMAND FOR PETROLEUM PRODUCTS is broadening. Gasoline withdrawals in August are estimated at 6,300,000 barrels. Heavy fuel oils are seasonally in better demand, and lubricants—particularly Pennsylvania bright stock—were active. The Bureau of Mines estimate of crude requirements in September is slightly higher than for August, and well in line with current output.

ESTIMATED DOMESTIC CONSUMPTION of crude rubber in August amounted to 35,000 tons, the fourth consecutive monthly gain, and the second month in which consumption has exceeded imports. The tire industry, which has averaged only 35% over the past year, increased its operations by nearly 8%, while tire inventories were down 6 1/2% to the lowest point in two years. There was an active trading market, and also some substantial factory interest toward the end of the month.

WORLD TIN CONSUMPTION is far below 1937 levels, the decline of 42% in the U. S. being the most severe decrease. The principal factor in this situation is the abnormally low rate of tin plate production—30% of capacity. An improvement in this field and in automotive consumption seems assured for the balance of the year.

AUGUST SALES WERE IN small volume, dropping below 1,000 tons in one week. Unfilled orders are down to 30,000 tons. Shipments are fair as galvanized sheet production is now up to 57%.

Market

THE PAPER PRICE LIST is generally unchanged and is reported as firmer than for many months past, the board market being particularly strong. Imported pulp declined in August, as did some of the coarser rags. Flat waste papers were up during the month.

RETAIL PRICES ON GASOLINE were exceedingly weak in August, and the tank car price dropped 1/2 cent to 6 1/2. Excess stocks of fuel oil were also reported as selling below refinery prices. Pennsylvania lubricants were up 1 1/2 to 2 1/2 cents per gallon. At mid-month, three independent companies posted a price of \$1.20 per barrel for East Texas crude, a reduction of 15 cents. Major companies took no action until the end of the month, when a 10-cent reduction to \$1.25 became general. Pennsylvania crude was down 12 cents on September 1st.

AS USUAL, THE RUBBER MARKET in April experienced a number of minor fluctuations due to profit taking, stock market influence, the restriction pact, tire statistics, and the like, but fundamentally the trend was firmly upward, carrying on the advance which started in June and which has shown a price increase of 40% in the past three months. Going into new high ground in the third week, spot prices reached 16 5/8 cents on the 24th, with the customary premium on forward positions. The September 1st price was off 7/16 from this high mark.

THE JULY PRICE ADVANCE in tin was completely nullified by a steady and dreary decline in August. Dropping below 44 cents on the first day, the movement was irregularly down with only minor and short-lived recoveries, to 42.80 cents on the 30th. The month closed at 43.20. Trading was in negligible volume.

THE PRICE LEVEL WAS unchanged at 4.75 cents, relatively favorable as compared with the position of other metals, and especially in view of a London price of 2.86, which makes the foreign metal competitive at several consuming points.

PERSONALITIES in the NEWS

PHILIP NORMAN has been appointed purchasing agent for the Michigan Tool Co., Detroit, succeeding the late Harry A. E. Duffey. Mr. Norman has been associated with the purchasing department for the past four years.

T. P. HARRIS, Assistant Purchasing Agent of the Canadian National Railways at Montreal since 1926, has been named Purchasing Agent for the Grant Trunk Western Railway at Detroit, succeeding W. E. EVANS, who becomes general tie and timber agent of the Canadian National, succeeding the late G. P. MacLaren. G. B. FINDLAY has been named assistant to Mr. Evans in his new position.

KARL H. SUDER, Purchasing Agent for the Akron, Canton & Youngstown and Northern Ohio Railroads, has been made freight traffic manager of those lines. He is succeeded in the purchasing office by J. F. CLEMENTS, formerly assistant purchasing agent.

HARRY B. MORTIMORE, Purchasing Agent for the American Dredging Co., Philadelphia, was guest of honor at a recent testimonial dinner tendered by the employees of the company to mark the completion of his 50th year in the company's service. Mr. Mortimore became purchasing agent in 1916, and for the past eight years has been secretary and treasurer. He is a past president of the Philadelphia Purchasing Agents Association.

HARRY C. YOUNG has been appointed purchasing agent of the Delaware & Hudson Railroad Co., Albany, succeeding HORACE K. T. SHERWOOD, resigned. Mr. Young has been with the company for thirty years and was assistant purchasing agent prior to his recent advancement.

COL. WAYNE R. ALLEN, Purchasing Agent of Los Angeles County, was appointed to the newly created post of Administrative Officer for the County, effective September 8th. He will continue to supervise purchasing.

JOHN COODE of Nashville has been appointed State Purchasing Agent for Tennessee, succeeding EUGENE L. COILE, who has resigned to become Knox County Engineer.

Obituary

FRANK L. MORRIS, who directed the New York State Department of Standards and Purchase from 1930 to 1936, died of a heart attack at his home in Warsaw, N. Y., July 30th.

CHARLES H. THORNE, 70, formerly purchasing agent of the Rapid Transit Street Railroad Co., Newark, and the North Jersey Street Railway Co., and continuously identified with these and successor organizations for 47 years prior to his retirement from active business a year ago, died of a heart attack at his home in East Orange, N. J., August 4th.

RUD K. BOGGS, 43, Purchasing Agent for the Newport Rolling Mill Co. and Andrews Steel Co., died at his home in Covington, Ky., August 9th, after a lingering illness. Mr. Boggs was an active member of the Cincinnati Association.

ALFRED M. MOSHIER, formerly purchasing agent of the Market Basket Corp., Geneva, N. Y., up to the time of his retirement from active business three years ago, died at his home in Holley, N. Y., August 20th.



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Administrative Problems in State-Municipal Purchasing

"I agree with you that consolidating the purchases of political subdivisions is good theory, but difficult to work out in practice for many reasons."¹ These are the words of Mr. Walter N. Kirkman, Chairman of the Governmental Purchasing Committee of the National Association of Purchasing Agents. Why are the administrative problems in state-municipal purchasing so difficult? In the beginning it should be noted that we are dealing with a field in which opinion holds full sway. Statistical studies are unknown from the standpoint of either theory or practice and individual experiences form the basis for generalizations which obviously are dangerously inadequate in many instances.

From observation of the existing systems we may speculate regarding the elements necessary for a successful plan.² The nature of the state organization apparently is not of great significance. The several states now maintaining state-municipal purchasing arrangements do not agree as to the location of the function. For instance, in Virginia the purchasing agency is a part of the department of finance; in Wisconsin it is found in the executive department; in Pennsylvania it functions in the department of property and supplies; and in New Hampshire it is set up as an independent agency. While it is definitely a staff function and probably should not be confused with a line department, there does not appear to be any obvious effect of having it in one place or another. The func-

How far can material requirements of various governmental subdivisions be consolidated for economical purchase?

STUART A. MacCORKLE

Director
Bureau of Municipal Research
The University of Texas

tional aspects are probably much more significant than the structural.

More significant is the relationship between the state and the municipalities. It must be clearly understood that this arrangement is not intended to detract from the independent character of the municipality. The individual community retains the unquestioned right to determine whether or not it desires to take advantage of the plan. The state merely provides the machinery whereby the municipality may secure the benefits of volume purchase and improved competition. In no instance is there any compulsion on the part of the state, and almost invariably the state has leaned over backwards to prevent either the municipalities or the vendors from feeling that any pressure was being brought to bear.

A Reasonable Proposal

It seems safe to assume that state-municipal purchasing will not greatly increase the personnel of the state office. Where the plan functions today the state has merely assumed the job of securing the benefits of its contract to the municipalities, and once this arrangement has been made, it may very conceivably become automatic. Without going into the details of the contracting procedure, we may speculate that during periods of a rising market the vendors may hesitate to accept the arrangement, but there is reason

to believe that the pressure of the impending state contract may be sufficient to cause them to capitulate.

Unrealized Advantages

Existing present structures are inadequate because they do not absorb the maximum benefit from the system. The assumption is that the municipalities, unable to secure low prices individually, will come under the state contract. If the municipalities may profit by the increased volume of the state, why should not the state likewise profit from the increased volume created by the municipalities? If volume affects price, it should follow that the greatest advantage would accrue to the state and the municipalities if their combined volume constituted the basis for the contract instead of only the state volume. In other words, today the municipalities are parasitic, absorbing the advantage which the state has obtained, but contributing nothing of their own. Actually, the municipalities combined may purchase more of certain commodities than does the state, and this advantage would facilitate price reduction not only for the municipalities but for the state as well.

This scheme would involve but a small amount of additional administrative detail. It would be necessary for the participating municipalities to submit estimates of their needs in order that those estimates

¹ Letter from Walter N. Kirkman to M. G. Toepel, Research Assistant, Bureau of Municipal Research, The University of Texas, March 18, 1938.

² The states providing for and practicing to some degree state-municipal purchasing at the present time are Michigan, New Hampshire, Pennsylvania, Virginia, West Virginia, and Wisconsin.

might be incorporated with those of the state in the so-called bid book. The vendor would then contract, not on the basis of the state estimate and a small amount of anticipated municipal business, as occurs today, but on the basis of the sum of the state and municipal estimated needs. If volume purchase results in lower price, it should then follow that the price would thereby be lower than that which the municipalities could obtain individually, collectively, or by buying through the state contract. The state agency by administrative order could establish the implementation necessary to bring this into effect. If the municipalities submitted their estimated needs on form sheets in advance of the date on which the state made contracts, the total estimated consumption could be determined. The same rules regarding acceptance of the estimated amounts which apply to the state departments could be extended to the municipalities. This would make it necessary for the municipality to anticipate its needs, and presumes the existence of an intra-unit purchasing agency.

Whose Responsibility?

The state would assume no other duty for the municipalities than to secure a contract price for the estimated volume of goods. The contracts for each municipality's share of the commodity would become a matter between the municipality and the vendor. Without doubt the immediate assumption is that the state is thereby binding the municipality to a contract, and that the state might force the municipality to make purchases at an unreasonable rate. This might be true if we started from nothing, but knowledge of past practices would indicate a different situation. For the municipality to proceed in this manner is no different than the prevailing arrangements in cooperative purchasing among municipalities. This device would obviously be cumulative. Beginning with a few commodities, it might be extended as additional commodities were observed to be adaptable, in much the same fashion as a like program now

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functions in Hamilton County, Ohio. The entire concept is predicated upon the presence of individuals in the state organization who are interested in expanding this relationship. Its distinctive feature is that it permits the complete use of the principle of volume purchases.

Acceptance of the Plan

An apparent defect in virtually every state-municipal purchasing plan today is the lack of a strong desire to extend the process. Either the state personnel is lax, or inhibiting factors make aggressive attitudes unwise. Municipal government today requires that every trace of efficiency be made secure. It is for the experts to inform the people of the possible alternatives and for the policy-determining agencies of the government to interpret the feelings of the populace. If knowing the alternatives the populace still continue to inhibit efficiency, they must suffer the consequences of costly government, but if the clamoring of every articulate group for reduction in governmental costs is intelligent and sincere, those in control must be willing to implement that demand.

Under the existing systems the state purchasing agency seeks to secure the state contract price for the municipalities. In those states in which the municipalities are authorized to purchase under the state contract, the vendor has no alternative other than to accept the municipal order, but the problem is not so simple in states such as Wisconsin and Pennsylvania, where the arrangements for municipal purchasing depend entirely on the good will of the vendor. There are obvious pressures available in the form of the lucrative state contracts but a question might arise in the event that the vendor did not choose to extend the arrangements to the municipalities. Where the law requires that the bid be given to the lowest competent bidder, it is conceivable that the vendor who refused to accept the municipal business might still be the low bidder.

More significant is the fact that the state contract is based on vol-

ume delivery. Obviously the cost of commodities may increase as the bulk declines or as the number of delivery points increases. Generally the central points have the cheapest prices with gradual increases occurring as the periphery of the state is approached. Whether this is due to distance, volume, warehouse facilities, transportation costs, or other factors, there is indication that an adjustment between the state price and that to be paid by outlying communities will probably have to be made. On the other hand, there are many commodities—tires, incandescent lamps, and cement among them—the prices of which do not vary anywhere in the state.

Problems of Storage

Municipal participation in the state purchasing program would result in municipalities being forced to provide for the storage of certain commodities bought in bulk to gain maximum price reduction. This becomes a difficult task. Adequate housing facilities must be maintained, with a consequent reduction in the financial advantage of such purchase, and deterioration must be guarded against. Prolonged investment of municipal money in commodities which are only periodically used must be prevented. Facilities for the distribution of the stock must be arranged, and checks on its honesty made. An elaborate plant will nullify its reason for existing, just as an inadequate plant will lose the savings made by centralized purchasing. Of necessity, bulk purchase precludes the possibility of including perishables or commodities which deteriorate rapidly.

In certain instances the storage problem is automatically solved by vendor-purchaser relationships. In the matter of incandescent lamps, for example, the state contract may not provide for bulk shipment, but for instalment deliveries instead. In tire purchases, the State of Texas requires the vendor to maintain an adequate stock at some twenty-five places throughout the state. Other commodities require nothing but a vacant lot for storage and in such cases the problem is minimized.

The storage problem is not peculiar to centralized purchasing, however, insomuch as every municipality must make provision for storage if it hopes to take advantage of a buyer market. All that purchasing through the state may do is to accentuate the problem.

The Local Vendor

A major administrative problem is that of convincing the policy-determining agencies of the local government that it may not be advantageous to buy at home. Purchasing through the state automatically stops all hope of consistent purchasing from the local vendor. No single criticism of the plan of municipal utilization of the state purchasing agency occurs as often as the fact that it will result in loss of markets to the local vendors. Because of the relationship between the policy-makers and the vendors, obvious pressure is brought to bear on the former everywhere. If the local merchant cannot compete with outside vendors, the moral issue of the responsibility of the local government to its citizens is resurrected.

Virtuous as that argument may be, exceptions to the rule of the lowest bidder open the way for a host of administrative difficulties. An increasingly complex series of decisions will have to be made as the exceptions become increasingly numerous. With purchasing through the state on a voluntary basis, with a politically-minded policy-forming group, and with a purchasing official forced to follow the dictates of the policy-forming group, purchasing through the state is at a decided disadvantage. Whether or not the municipality can down this bogey of local purchasing probably depends on how successful it is in selling the idea of savings in government. To some degree, under the present system of state aids and taxation of absentee owners it can be argued that the local vendor has little prior claim to sales.

An Effective Plan?

The infrequent use of the existing state-municipal purchasing organizations causes one to question their

effectiveness. One of the most significant checks on their value would be the number of commodities which might be purchased under them. The questions which arise in determining effectiveness are: (1) whether there is sufficient correlation between the commodities purchased by the state and the municipality, (2) whether communities buy a sufficient number of commodities in volume to warrant use of the plan, (3) whether all commodities may best be purchased in bulk, and (4) whether municipalities anticipate their needs sufficiently well to be able to purchase through the state agency.

There is much to be said for the fact that the state and municipalities do not purchase the same types of materials. As Mr. Walter N. Kirkman points out, the major state purchases tend to follow the institutional type whereas the outstanding municipal purchases tend to follow the engineering type. While there is this wide difference in demand, there are many commodities, such as cleaning supplies, office supplies, tires, light bulbs, gasoline, highway supplies, etc., which most governmental units require year after year. Although these commodities may not constitute the bulk of purchases, they do constitute a constant drain on the resources of the unit.

Purchasing through the state can best be done in bulk amounts. It is doubtful if the state price would apply in small quantity purchases or in instances of special commodities. Janitor supplies, lamps, tires, and the like are commodities which can be purchased in quantity from a general supply. Letterheads, printing contracts, repairs, etc., do not adapt themselves to such a procedure. Without much difficulty a municipality can devise criteria which would make virtually all commodities of special nature. A particular brand of fire hose, a special brand of light bulbs, certain size paper towels, and other variations in fabulous numbers could be created. Likewise many variations might be eliminated.

Virtually every purchasing agent must standardize requirements, and



This photo shows what excellent seeing conditions are provided when light conditioning was installed in this American Tobacco Co. office.

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THE American Tobacco Company, makers of Lucky Strike cigarettes, recently light conditioned all five floors of office space in their 111 Fifth Avenue Building, New York City.

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it is conceivable that standardization would increase the number of commodities which might be purchased in inter-unit arrangements. It is probably true, however, that the smaller communities are less apt to have bulk purchases, and because the utilization of the advantages of the state volume purchases is most advantageous to them its value might be reduced.

Demonstrated Savings

If, however, it can be argued that school districts, for example, can profitably purchase through the county school agency, it must be true that small municipalities can profit from centralized purchasing as well. If the subordinate school units in Los Angeles County, California, could save \$15,000 by purchasing through the county and those of Fresno County could save 45% for three years on thirty items purchased under the same method,³ municipalities should be able to save by purchasing through the state.

Many commodities do not lend themselves to price reduction for increased volume. The larger the percentage of these commodities in the municipality's list, the less valuable will be the state purchasing arrangement. The experiences in Hamilton County, Ohio, the California counties, and the several states maintaining league cooperative purchasing plans is strong evidence of the possibility of bulk price reduction. The significant point in this regard is that there is much evidence to show that a definitive low price has not yet been established, and as long as that situation exists there is hope that the pressure of a volume contract may cause price reduction. The incentive created by the mass requirements plus the pooling of information may well cause a reduced price where previously the price had been stable. With costs of production constantly declining and new and better commodities constantly being marketed it is not reasonable to assume that all prices have been stabilized.

³ "Centralized Purchasing in Winnetka," *Illinois Municipal Review*, April, 1938.

But even assuming that the overwhelming proportion of the municipal purchases might be made through the state, will the mechanics of the process permit such purchase? It would not be possible, under the state plan, for the municipality to purchase in small quantities and expect the state price. The needs of the future must be anticipated and this requires an agency in the community which is capable of accumulating the estimated requirements of its many divisions. Few such agencies exist, and at best they have not yet reduced emergency purchases to the minimum. What portion of the commodities will actually come under the arrangement depends upon the effectiveness of the controls within the community. Departments in the community which desired to thwart the process could readily reduce the bulk of the purchases made through the state by neglecting to turn in estimates. Again, the success of the plan depends upon the support given it.

Promoting the Idea

There is evidence that after the momentary stimulus of the legislative action establishing state-municipal purchasing, the process is forgotten. Provisions for informing the municipalities of the service available are neglected, or the assumption that the impetus for its functioning must arise with the municipality is strictly adhered to. The result is that the function lies dormant. Both state and municipal agencies indicate the lack of stimulation to use the device.

With this situation it is small wonder that little is accomplished. It would appear that either the state or the state organization of municipalities ought to indicate to the subordinate units that the service is available, and that savings might be made. Available prices on major municipal commodities ought to be publicized in order that the advantages might be discovered. From the existing situation one might almost assume that the arrangement is illegal or otherwise obnoxious. In this day of high-pres-

sure salesmanship, at least a brochure from the state ought to facilitate the function.

A perusal of the statutes and ordinances dealing with purchasing generally indicates exceptions to the plan. State departments able to exercise the greatest pressure succeed in being omitted from the general rules. The result is that the volume which might otherwise be obtained is reduced in proportion to the number and size of the exceptions. One can hardly criticize municipal reluctance to use the state agencies when large portions of the state organization itself are exempt from its functioning.

Overcoming Distrust

Rather frequent comments on a state-municipal purchasing arrangement indicate municipal distrust of the state process. In a measure this may be due to the fact that virtually the only publicity given the purchasing program is that which results from malfeasance investigations. More positive publicity would facilitate use of the state agency. It appears that today such publicity ought to be directed to the policy-forming agency, which must be educated in the advantages obtainable. If people who devote all their time to municipal business are unaware of the existence of these facilities, there is little hope for councilmen to consider it.

Frequently the authority for determining the product to be used rests in the hands of department heads, where prejudices and pressures are rampant. Municipal purchasing agents themselves may have more faith in their own ability than in the scientific approaches used by the state. Where appreciable price reductions for standard products are available, too much administrative discretion may be undesirable.

A successful state-municipal purchasing plan depends upon the subjugation of pressure groups, the elimination of fears and prejudices, and the unification of the control over purchasing. Intra-unit centralization is fundamental, and it must be supplemented by open-minded study of the possibilities of

purchasing through the state. At least until its possibilities have been explored, we cannot discard it as a stepping stone toward more efficient government.

Educational Course at Seattle

The educational course annually sponsored by the Washington Association will get under way this month on a three-part program:

1. *Public Speaking and Personal Development*, led by Atty. H. A. Seering, formerly instructor in public speaking at the Universities of Wisconsin and Oregon, and debating coach of the Seattle Chapter, American Institute of Banking.

2. *Economics of Recovery and Reform*, led by Joseph Demmery, Professor of Business Fluctuations, University of Washington.

3. *Purchasing Department Procedure*, led by Henry A. Burd, Professor of Economics and business, University of Washington.

The committee in charge comprises G. P. Locker, Ted Anderson, C. R. Bean, E. S. Carico, Hall Johnson, and R. W. Nisbet.

W. T. Hall

(Continued from page 26)

tomers were both able and eager to pay.

One of the important contracts which came into the shop in the later years was the building of custom bodies for Rolls Royce of America, the only other American-built car of a comparable class. the outcome of that connection was fairly easy to predict. This was at the peak of the merger movement in industrial organization, and a consolidation of the two interests was inevitable. Rolls Royce was the dominant factor, and with the duplication of two full complements of staff organization the Brewster personnel had to go. Hall had seen the situation developing; nevertheless it came with heart-wrenching abruptness.

He might have retired then, on a modest scale, but idleness and stagnation were unthinkable. How-

ever, before he had time to fret about it there came a call from N.A.P.A. George Renard had only recently been called to the office of secretary, and the headquarters staff was in process of a general overhauling. The Association needed a man of ability and practical experience, above all one in whom the membership could place implicit confidence. Pop fitted the specification as if made to order. All he got out of the business upheaval was a two weeks vacation; he's been serving purchasing men from 11 Park Place ever since.

OUTSIDE OF HIS business duties, Pop has had many varied interests in life and has zestfully enjoyed them to the full. His home always came first. He can look back on forty years of happy companionship in work and play, a home where friends were always welcome and where they delighted to come. He has taken his part in civic affairs. At Haworth, N. J., where he formerly resided, he was a member of the council and of the board of education, and served for a time as borough clerk. He was treasurer of the Haworth Golf Club (now White Beeches) and for many years an ardent baseball fan. In the New York Purchasing Agents Association he held the offices of treasurer and president, and has contributed mightily to the gaiety and comradeship as well as to the solid achievement of that group. An Episcopalian by faith, he is no stickler for strict denominational lines and was a trustee of the Union Church at Haworth. A Shriner, one of his favorite fishing companions for many years was the parish priest.

He has never consciously formulated a philosophy of purchasing. His own experience and policies as a buyer were characteristically based on a broad faith in human nature. He trusts people, and has found most of them worthy of that trust. In the few cases where it didn't work out that way, he has simply made it a point not to be caught twice in the same mistake. This policy of being careful about the sources from whom purchases



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are made and then proceeding in mutual confidence, proved to be a highly successful plan. Most of the differences which inevitably arose from time to time were found to be relatively simple of solution when buyer and seller sat down together in friendly fashion and talked things over. In long years of purchasing, his company had not a single law suit or threatened lawsuit arising out of any transaction. Many splendid vendor relationships developed. During one exceptionally severe winter, when New York's rivers froze into solid sheets of ice and brought to a standstill the barge traffic on which most industries depended for their fuel supply, several of the Long Island City plants were forced to shut down; but friendly vendors were glad to bring in Brewster's requirements, a truckload at a time and after a long and difficult haul, so that operations could continue without interruption.

His New England conscience is no puritanical heritage. He is tolerant of all things but one, and that is the failure to carry the ideals and ethics of private conduct into the business relationship. For to him, office hours and the responsibilities of the job are inseparably a part of life itself. Perhaps that is one explanation of the position he bears among his associates and those with whom he deals. He has ordered his life on the basis of friendship and integrity. Friendship and integrity in business follow as a matter of course.

—S. F. H.

How Cotton Is Marketed

(Continued from page 30)

futures markets the prices vary according to what the traders think is the relationship between supply and demand, but on account of the hedging operations of consumers, the variation between spot and futures markets is held to a minimum. Normally the seasonal high prices for cotton are reached in June and July, and the low prices develop in October and November, which are the largest selling months. However, there are so many exceptions

to this, that generalizations are risky.

The cooperative marketing bureaus are now making an effort, with some success, in doing away with the forced heavy selling in the fall, due to the necessity of paying back loans which growers have received for the planting and growing of their crops. To this end, the government has also made loans to the growers. This, however, does not affect the total supply. Nor have the efforts at acreage curtailment been wholly successful in controlling supply, for increased world prices have always had a tendency to stimulate foreign growers to increase their crops.

Constructive Purchasing Policies

(Continued from page 23)

serve. Only thus can the department bring to the company the service and the ideas and progress which justify their existence.

RESULTS

Any purchasing department must expect to justify its existence, not only on the long range viewpoint imposed by constructive purchasing policies but also on the results of its day to day operations. This requires that a standard be set up as to what purchasing under efficient management should accomplish. The fact that many of the activities produce a dividend or deficit of good will should not prevent an attempt to measure the efficiency of the tangible factors.

Any valid analysis of purchasing expense involves a consideration of the following: purchasing administrative expense; gain or loss resulting from forward buying of materials and supplies; storage and warehouse expense; and losses due to errors and delays. In addition, consideration may be given to the disposition of scrap and waste.

RELATIONS WITH SURROUNDING DEPARTMENTS

A purchasing department is in constant contact with its own organization and "should be receptive

to competent counsel from their colleagues and be guided by such counsel without impairing the dignity and responsibility of their office."¹¹ Naturally, the purchasing agent will recognize within his own company those of particular experience and training and obtain from them opinions and facts pertinent to the procurement of a given article. If these facts or opinions can be developed best by direct contact with a vendor, then the purchasing department would be remiss in its duty if such contacts were not arranged.

Unfortunately for the buying profession, there are instances where the line between recommendation and dictation is so poorly defined that a purchasing department feels constrained to give undeserved importance to the counsel tendered. This breaks down the ability of the purchasing department to function properly, by encouraging and justifying the vendor and user in attempting to bypass the purchasing department.

Even in well managed companies, where lines of responsibility and authority are well defined, there are those who aspire to the prerogatives of the buyer, and their opinion may or may not be of a quality which should make it invariably sought by the purchasing department. In any



case, the purchasing agent should make his own decision based on his own opinion of the competence and impartiality of the counsel.

VENDOR RELATIONS

Vendors usually regard purchasing departments as something to be dealt with only in case of necessity and their attitude is frequently justified. Some of the following comments offered from the sales departments of concerns with national distribution exhibit this feeling.

"We believe that no purchasing agent has authority to lose money for his concern, which is likely to happen if he does not open-mindedly permit each salesman, who has a legitimate proposition, to fully present his product."

"Prompt audiences with calling salesmen, and if early interviews are impossible, advice as to when appointments may be had."

"A purchasing agent should refer the salesmen to the engineering department promptly on matters of a technical nature and not try to handle such matters about which as a rule the average purchasing agent knows nothing."

"A discontinuance of the practice of using a quoted price on an inferior article to drive down a price on a better article."

Not all of the irritation can be laid to the purchasing agent because even those earnestly trying to carry out constructive purchasing policies find difficulty in getting vendors to cooperate, usually because the vendor's sales policy has a quite different conception of the procurement function and wants it carried out in his way. Education is needed on both sides.

THE OBJECTIVE OF THE PURCHASING DEPARTMENT

A successful purchasing department will so conduct its relations with vendors that they have faith in the fairness and capability of the department, and realize that their own best interests are being served to the greatest advantage by such contact. To do this, the purchasing department first must know the

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actual and potential needs of the company, and the vendors must be convinced of that fact. When the vendor understands that any material must have the approval of the technical, production and purchasing departments, and that the three departments are working together and have no secrets from each other, then the vendor will accept the purchasing department as useful and will act accordingly. Contacts with the other department should be arranged by the purchasing department as needed and there will be frequent reason for so doing, but the purchasing department should be kept informed by both vendor and the department contacted of developments which would affect the use of the vendor's material either favorably or otherwise.

PREJUDICE

A purchasing department is "obligated to buy without prejudice, seeking to obtain the maximum ultimate value for each dollar of expenditure."¹¹ Thus is set forth not only the basis for purchasing performance but also an indispensable attribute of the successful buyer—the ability to judge fairly and impartially the men and materials with which he has to do in properly serving his company. Aptitude, training and experience are necessary qualifications in the exercise of the procurement function, but their possessor must have, above all, impartial judgment, for prejudice—or prejudging without a consideration of the facts—is fatal to the objective set—maximum value for the dollars expended.

CONTRACTS AND SPECIFICATIONS

In the fulfillment of a constructive policy the use of a simple order or contract form with reference to carefully worked out specifications which become a part of the contract is of great help to good vendor relationship. The president of a national firm writes: "There is a growing tendency on the part of purchasing agents to impose vicious 'hold harmless clauses' on sellers—which either mean nothing at all or are so ambiguously worded that

they could only lead to litigation if an attempt was made to enforce them. There are many that obviously show legal preparation and impose liabilities on the seller which should be rightfully assumed by the buyer and which are ordinarily imposed on the buyer by law. The mushroom growth of the 'hold harmless clause' indicates that purchasing agents are blindly following the practice of others by including a 'hold harmless clause' when new purchase order forms are printed." A true meeting of the minds is an admirable method of creating mutual respect for obligations. A fundamental knowledge of the "uniform sales act" governing the rights of buyers and sellers of merchandise and effective in 33 jurisdictions of the United States including practically all of the important commercial states is desirable. The clash between the provisions of the sales contract form submitted by the vendor and the purchase order form of the buyer lead to trouble and possible litigation. Both order and contract should refer to each other and become a part of the agreement, being sure there are no unreconcilable clauses. It is easier to be sure when there are fewer clauses, and more emphasis should be laid on the intent of the purchase.

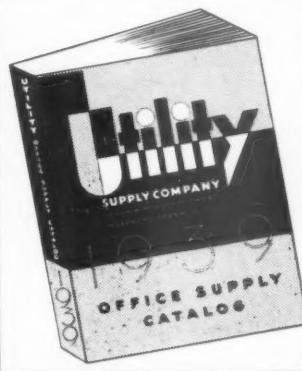
SHARP PRACTICE

Sharp practice will breed sharp practice and unless a purchasing agent admits he is smarter than any of his vendors, then he never can be sure whether or not his company is securing the maximum ultimate value for each dollar of expenditure. Such complacency, self esteem, or ignorance probably would not admit of any other conditions; but whether admitted or not, the question revolves around the relative proficiency of one man versus many men in smart tricks, that is, one purchasing agent versus many vendors.

Sharp practice is a poor prop for a purchasing department. This is not intended to inhibit a purchasing department from questioning price when done with knowledge of costs or quotations on similar products of

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equal quality or of a quality good enough for the purpose. The sales manager who requested "a discontinuance of the practice of using a quoted price on an inferior article, to drive down a price on a better article," has assumed that his product is the best and that there is no competition from a quality standpoint, which is a very common and understandable viewpoint of vendors.

PREROGATIVES OF THE PURCHASING DEPARTMENT

When a using department has stated a need by a suitably authorized requisition, it becomes the prerogative of the purchasing department to conduct and conclude all negotiations, including the selection of the source of supply, for the purchase of the desired material. A purchasing department should consider all of the factors of vendor argument, experience, company policies, together with the desires and recommendations of the technical and using departments. While the purchasing department has a right to question the need of the quality specified, unless it can convince the user, then there is no option but to obtain the quality requisitioned, under the best arrangements that can be negotiated. The prerogatives are negotiation and selection of source of supply, not negation of a user's specification for particular quality.

Conclusion

Constructive purchase policies cannot be made effective by the purchasing department alone. Management must state its policies, and supply and sustain adequate personnel. The cooperation of surrounding departments must be secured, and vendors educated to the use and value of the purchasing department. This involves thought, planning and constructive effort. Such effort is more than justified because of the results which are possible from common use of constructive purchasing policies.

¹ National Association of Purchasing Agents. Principles and Standards of Purchasing Practice.

Among the Associations

AUGUST 2

Hudson, Ohio—Golf tournament of the Akron Association, at the Lake Forest Country Club.

AUGUST 6

Los Angeles—Annual family picnic of the Los Angeles Association, at Griffith Park. Baseball, contests, prizes, wiener bake. Al Lama was general chairman of the event.

AUGUST 11

Seattle—Annual golf tourney of the Washington Association, at the Fircrest Golf & Country Club. Gilbert A. Waite of Tacoma won permanent possession of the trophy by scoring his third victory. A steak dinner was served at the clubhouse in the evening.

AUGUST 14

Oswego, Oregon—Annual family picnic of the Oregon Association, at the grounds of the Oregon Portland Cement Co.

AUGUST 16

Detroit—Golf tournament of the Detroit Association, at the Clinton Valley Club.

AUGUST 21

New Orleans—Annual family picnic of the New Orleans Association, at Mandeville. T. H. Harvey was chairman of the committee in charge.

AUGUST 26

Cleveland—Summer party of the Cleveland Association, at the Manikiki Country Club. Golf, bridge, and dancing.

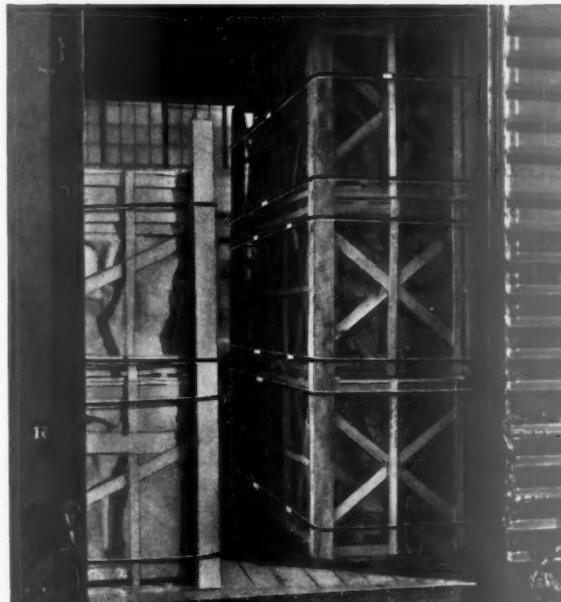
AUGUST 26-27

Asheville, N. C.—Quarterly meeting of the Virginia-Carolinas Association. Speakers at the Friday evening session included W. G. Thomas, Purchasing Agent of the Duke Power Co., Charlotte; C. W. Coker, Vice President of Sunoco Products Co., Hartsville; C. M. Byers, Manager of North Carolina Div., Standard Oil Co. of New Jersey, Charlotte; and George H. Freyemuth, Technician of the Standard Oil Co. A sound picture was shown through courtesy of the Standard Oil Co.

C. A. Cannon, President of Cannon Mills, Indianapolis, and Capt. J. E. Surrine, President of the J. E. Surrine Co., Greenville, were guest speakers at the Saturday morning session.

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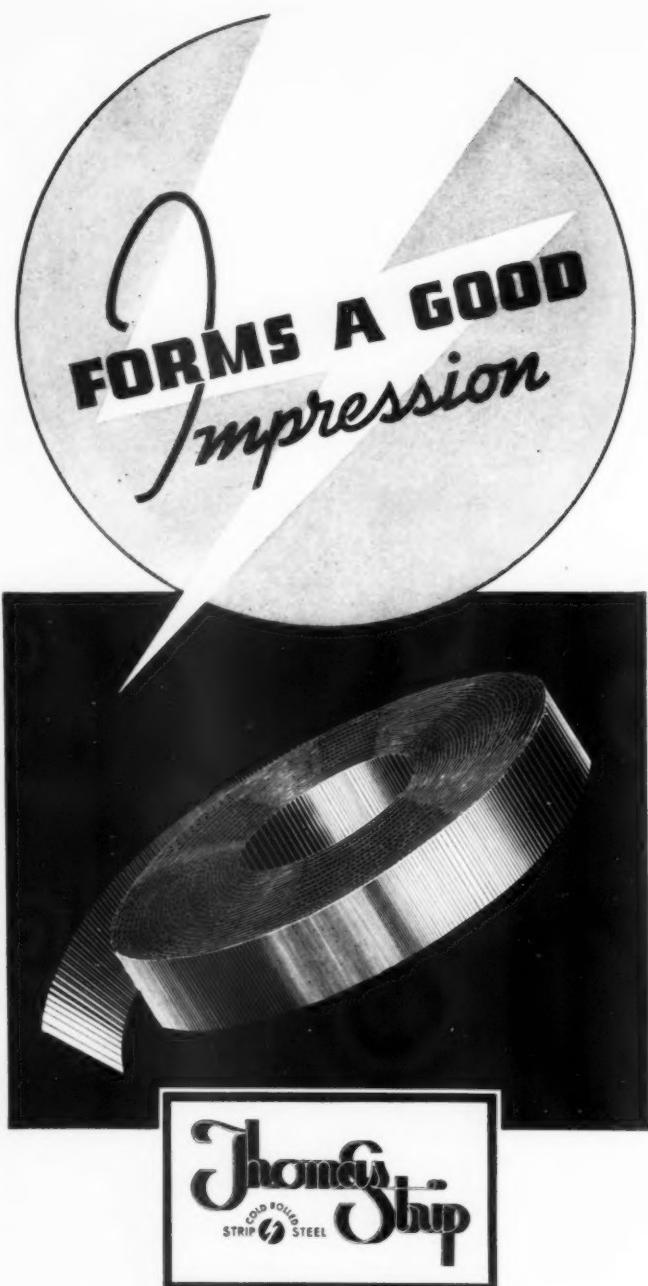
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Among the speakers and discussion leaders who will take part in the program are the following:

His Honor The Lieutenant Governor of the Province of Quebec, the Honorable E. L. Patenaude, P.C., K.C., LL.D.

J. W. Nicholson, City Purchasing Agent, Milwaukee, Wis., President of N.A.P.A.

G. A. Renard, Executive Secretary, N.A.P.A.

Bernard H. Yardley, Stanley Works of Canada, Ltd., Hamilton, Vice President for District No. 5, N.A.P.A.

Donald G. Clark, Brown & Sharpe Mfg. Co., Providence, R. I., Chairman of the Educational Committee, N.A.P.A.

O. S. Tyndale, K. C., of Montreal.

W. S. Barber of the Provincial Paper Company, Ltd., Toronto.

Julian G. Davies of Norman Slater Co., Ltd., Hamilton.

W. H. De Blois of Canadian Industries, Ltd., Montreal.

D. A. Loucks of Canadian Car & Foundry, Montreal.

R. Bruce Marr of Dominion Rubber Co., Ltd., Montreal.

S. Randolph Noble, Assistant General Manager, Royal Bank of Canada, Montreal.

Dr. J. B. Phillips, Associate Professor of Chemical Engineering, McGill University.

E. E. Ritcey of Dominion Wheel & Foundries, Ltd., Toronto.

A. H. Tallman of A. H. Tallman Bronze Co., Ltd., Hamilton.

Norman H. Taylor of Dominion Bridge Co., Ltd., Toronto.

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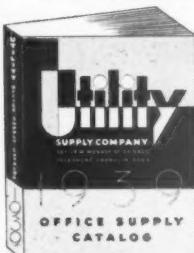
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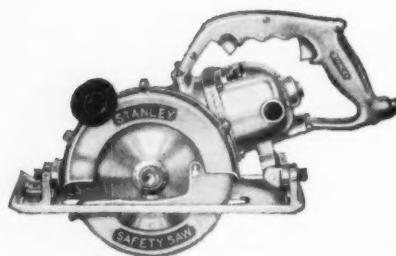
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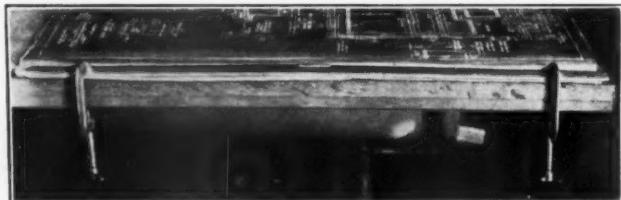


**SAFETY
SAW**

No. 637

FAST AND CONTINUOUS cutting is possible with this new tool designed particularly for use by carpenters, builders and shippers in cutting and trimming 2-inch dressed lumber, roofing, sheathing and other building materials. It has a 6-inch blade and cuts to a depth of $1 \frac{1}{4}$ inches. Only one adjustment is necessary to regulate the depth of cut. A new type duplex handle, with two triggers, makes it easy to handle in any position, and it is fully equipped with approved safety features. It is packed in a metal carrying case with combination rip and cross-cut blade, ripping gauge, wrench, lubricant, and heavy rubber covered three-wire cable.

Use coupon below



BLUEPRINT CLAMP

No. 638

FOR HOLDING A NUMBER OF blueprints in position on a board or table, the simple and effective assembly shown above has been developed. It consists of two C-clamps which attach over the end of the table, and a metal connecting strip that holds the sheets down securely and flatly in position, but does not interfere with leafing through them bookwise in order to make refer-

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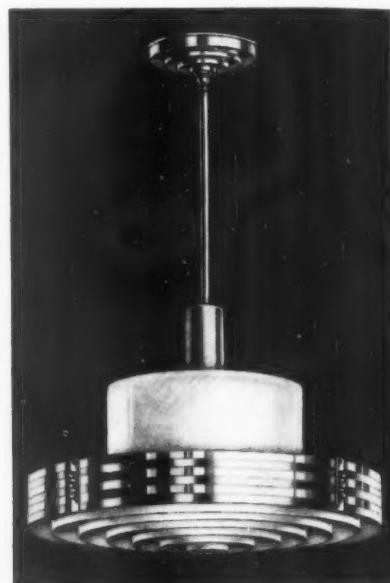
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**SAFETY
SAW**

ence to any particular print. For use by engineers, contractors, builders, purchasing agents, material clerks, and others who have occasion to refer to such papers.

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**LIGHTING
FIXTURE**

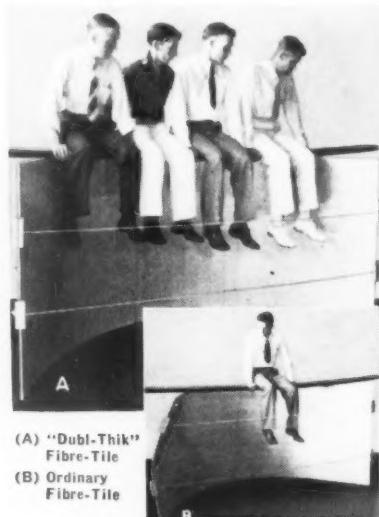


No. 639

THIS COMMERCIAL LIGHTING unit, designed for stores, restaurants, offices, and public buildings, provides for efficient and glare-less distribution of both direct and indirect light. The construction includes a new arrangement of concentric louvre rings in combination with an open glass cylinder, which reflect and diffuse the light both upward and downward with minimum interference. All surfaces are vertical, to prevent dust collection, and the open construction permits free passage of air and self ventilation. The design is distinctively in the modern manner.

Use coupon at left

FIBER TILE



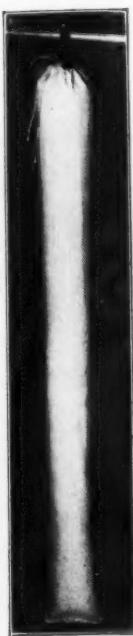
No. 640

ESPECIALLY DEVELOPED FOR use in washrooms in office and industrial buildings, as well as for kitchens and baths, is this new heavy-duty wallboard of fiber tile, $\frac{3}{8}$ inches in thickness, exceedingly tough and rigid, and with high insula-

ing value. It is provided in panels 4 × 12 feet in size, scored in 4-inch tile-like squares. The finish is natural ivory, and the hard, smooth surface is excellently adapted to finishing, a minimum of enamel being required.

Use coupon page 54

ANODE BAG



No. 641

COMpletely INORGANIC, FOR use in acid plating solutions, and impervious to attack by all acids except hydrofluoric, is this anode bag made of fiberglas cloth with bottom seam sewed with glass thread, and draw string of glass yarn. The finely drawn threads in the cloth provide excellent capillarity with a low voltage drop across the fabric. The bag withholds the smallest suspended particles, and can be cleaned for repeated use.

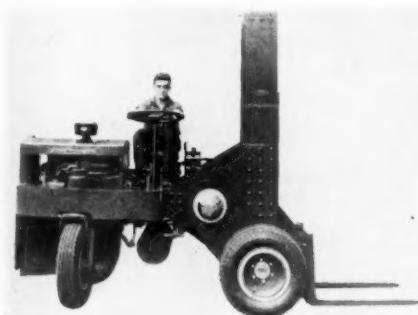
Use coupon page 54

CLEANER AND DEODORANT No. 642

COMBINING THE DUAL PRINCIPLE of simultaneously cleaning and effectively deodorizing, a new material has been developed for the use of industrial concerns having a problem of odor control in connection with processing operations or in general plant housekeeping. The material is odorless itself and has the property of counteracting odors without creating another odor. It is effective not only in dissipating previously formed odors, but also in those cases where odor formation is continuous due to the nature of the operation.

Use coupon page 54

POWER LIFT TRUCK



No. 643

THIS FORK-TYPE TRUCK is made in two sizes, rated for loads of 5 to 7 tons and 10 to 12 tons, respectively. The drive unit is a Chevrolet tractor engine with 4-speed truck transmission, and equipped with Bendix Duo-Servo service and emergency brakes which hold equally in both directions. Power elevation and lowering is by a geared hydraulic pump and power cylinder, which connects to a 1 3/4-inch roller chain anchored to the truck housing in adjustable arrangement. The truck is designed with a pair of 30-inch pneumatic-tired caster wheels located at the rear of the truck under the engine mounting. The operator is positioned at right angles to the center line. The two caster wheels can be turned to an angle of practically 90° with the drive

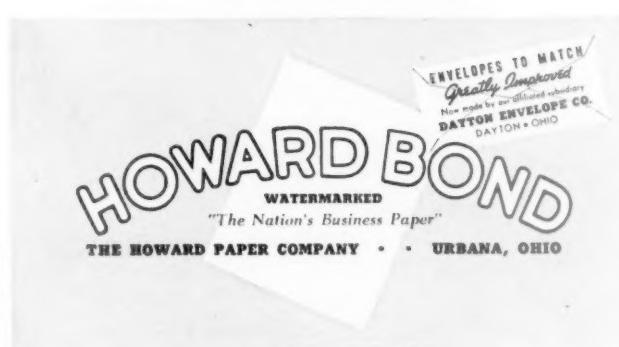
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wheels for turning in a radius equal to the distance between the two sets of wheels. In turning, the drive wheel is automatically locked on one side when the operator turns the steering wheel to the extreme right or left position, and the locked wheel becomes the center of rotation. The equipment is also available with a ram at the elevating end.

Use coupon page 54

SOFT BACK HACK SAW BLADE



No. 644

BY A SPECIAL HEAT TREATING process, this new hack saw blade of special alloy high speed steel is hardened on the tooth edge, while the back of the blade remains soft, providing a tough and elastic support for the cutting edge. The effect is to overcome brittleness and to provide an extra safety factor by making the blade practically unbreakable in a frame since it cannot shatter or fly in pieces. It is available in a complete line of hand frame and power sizes.

Use coupon page 54

CALKING LOADER



No. 645

THIS NEW SPECIAL CARTRIDGE has been developed for loading calking compound into calking guns with a substantial saving of time and elimination of all waste. To load, the cellophane wrapper and end lids of the cartridge are removed, the plunger is pulled back, and the nozzle taken off. When the cartridge is positioned, the nozzle is replaced and the gun is ready for use. Each cartridge holds one pint of calking compound, sufficient to do 20 lineal feet of a $\frac{5}{8}$ " bead, and every drop is used by this wasteless method of application. The compound is available in standard medium gray and eight additional colors—limestone, natural, cream, black, brown, green, white, and red.

Use coupon page 54

SWEEEPING MACHINE



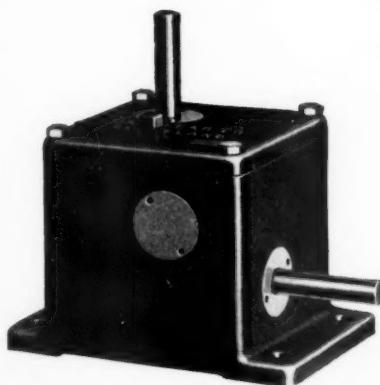
No. 646

A COMBINATION BRUSH AND VACUUM type unit in a self-contained design, powered by gasoline engine or electric motor, and delivering dust and dirt into a removable container, provides a rapid and efficient means of sweeping large areas in industrial plants, institutions, public buildings, platforms, etc.

The cylindrical broom is a self-cleaning unit designed to penetrate into hollows and cracks in the surface. It is 14 inches in diameter and can be worn down to 9 inches. The main brush is 27 inches in width, and an 8-inch curb brush is provided for working close to curbs and base boards. There is also a wall brush for attachment to an outlet on the machine, to clean walls and under equipment. The capacity of the vacuum unit is 700 c.f.m. Controls for guiding the machine and positioning the brush are located at a pair of handles at the rear of the machine. The driving mechanism is mounted integrally with the sweeper on a structural frame, equipped with balloon tires and anti-friction bearings. The operating weight is 700 pounds. Overall dimensions: 108 inches long, 40 inches wide, 40 inches high; turning radius, 54 inches. Gasoline consumption of the 4½ h.p. Coldwell engine is $\frac{1}{3}$ to $\frac{1}{2}$ gallon per hour. With electric drive, a 100-foot cable is standard equipment.

Use coupon page 54

SPEED REDUCER

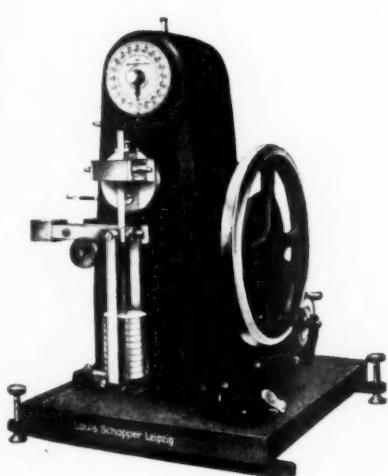


No. 647

SPECIALLY ADAPTED FOR USE where only limited space is available is this small vertical double speed reducer measuring $4\frac{1}{2} \times 4\frac{1}{2} \times 4\frac{1}{2}$ inches in outside dimension. The input and output shafts are at right angles in either the horizontal or vertical plane, and a special advantage of the unit is the fact that a variety of locations for both shafts is possible without changing the mounted position of the gear box. All gears are of SAE 65 bronze; option of ball or Timken bearings; shaft sizes are $1\frac{1}{2}$ -inch standard. For a torque capacity of 100 inch-pounds, there are five ratios, from 100 to 1 up to 800 to 1. For a torque capacity of 25 pounds, ratios are available up to 1,600 to 1. Other ratios can be supplied as specified.

Use coupon page 54

FATIGUE TESTING MACHINE



No. 648

FATIGUE TESTING OF A wide range of materials, including paper, cardboard, film, celluloid, metal foil, twine, tape, cloth fabrics, leather, thin sheet metal, and the like, is facilitated by this device. A test strip is loaded vertically at 10% of its ten-

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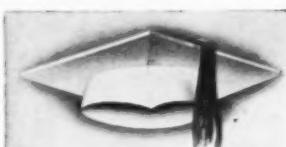
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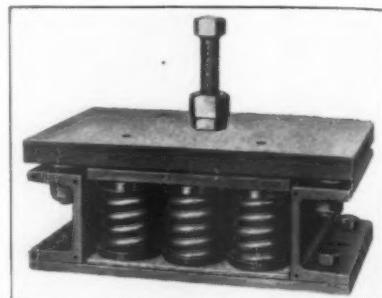
Announcements

Established in 1857

sile strength, and under this load is bent repeatedly to an angle of 90° on each side of the vertical axis, until it breaks. The number of bending alternations appears on the dial of the machine. Similar tests are made at 25, 50, 75, or any other percentage value of the tensile strength. A graphic calculation based on these bending-fatigue numbers indicates the number of times the material can be bent when not under tension. The bending mechanism is driven by a $\frac{1}{16}$ h.p. motor or can be operated by hand. The bending angle can be adjusted within a range of 10 to 180 degrees, and the dead-weight load can be set from 50 gm. to 5 kg. Two new models are available, adapted to specific types of material.

Use coupon page 54

VIBRATION INSULATOR



No. 649

THE VIBRATION INSULATOR illustrated is of the plate-and-spring design, the number and size of springs being varied as required to accommodate loads of from 200 to 12,000 pounds. The individual units can be assembled into one larger unit. The machine to be isolated is attached to the upper plate by an adjustment bolt which makes contact with the plate resting on the springs. Studs from the upper plate extend through the top flange of the side channel and are held in place by lock nuts. Steel cups between the upper and lower plates hold the springs in position. The lower plate and side flanges are anchored to the foundation, and alignment dowels projecting from the lower plate fit into holes in the upper section. When in use, the spring assembly is enclosed by removable side covers, not shown in the illustration.

Use coupon page 54

ROUND COMPOSITION BELTING



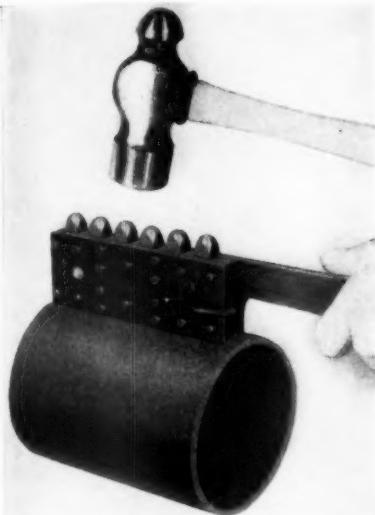
No. 650

THIS NEW TYPE BELTING is made of composition having a high coefficient of friction and guaranteed to be 100% round and uniform throughout its length, thus contacting the full surface of the pulley and providing an effective drive with less ten-

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sion and consequently less wear. It is constructed around an inner core of very strong flexible material which will stand an indefinite amount of flexing and is resistant to stretch, thus requiring a minimum of maintenance and attention. No fasteners are required, as the ends are joined by merely removing two inches of the composition and tying together the ends of the core. Designed for use on sewing machines and other types of light machinery, it has been found satisfactory in tests in shoe and garment factories over a period of several months. A line of flat and V-belts made on the same principle is now in process of development.

Use coupon page 54



SAFETY TUBE STAMP HOLDER

No. 651

PROMOTING SAFETY IN production and eliminating hazard stamping on tubing and other curved objects, this holder has an extended handle permitting a firm grip well away from the hammer blow. The stamps are inserted in the desired arrangement, and are held in place by a pin extending through the pocket and provided with a spring fit. The holder is notched at the bottom to assure a firm seat on the tube while in use. It can be used for either single or multiple characters, in straight line.

Use coupon page 54



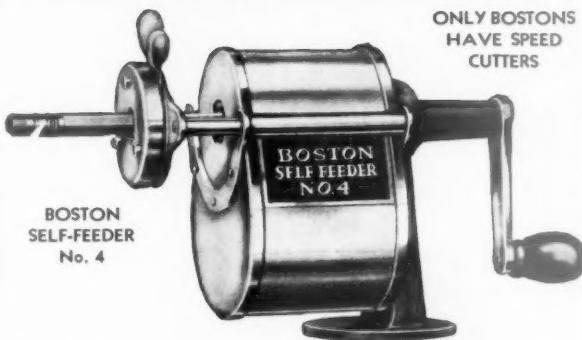
RUBBER LINED TANKS

No. 652

A NEW PROCESS IN the application of seamless rubber lining for plating and chemical tanks makes possible a multiple-ply lining of any desired thickness, in which the several plies are coalesced into a single, inseparable blanket of rubber, firmly bonded to the metal in a way to avoid the possibility of blisters, since all air particles are eliminated between the rubber and the metal. The new development represents a marked advance in the spray application of seamless linings, and is said to be proof against separation from the tank or within the lining itself. It is available in the form of completely coated tanks in

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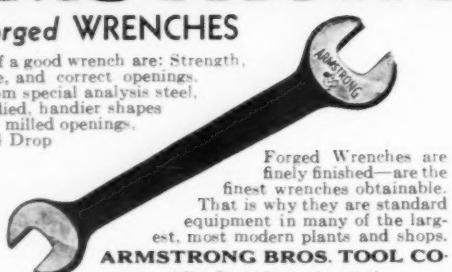
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DIAMOND ABRASIVE WHEEL

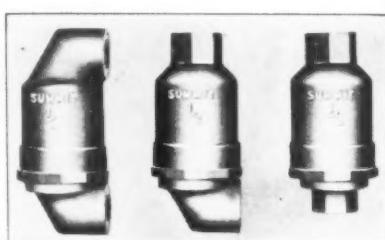


No. 653

IN THIS NEW TYPE abrasive wheel, diamond particles are embedded in a wheel rim of solid metal alloy that holds the particles securely and wears just sufficiently to maintain free-cutting operation. The wheel itself is not damaged by the heat of grinding, the corners stand up, and the whole assembly is said to be less subject to accidental injury than previous diamond-wheel designs. Designed to supplement rather than to supplant other diamond wheels, it is available in a comprehensive range of types, in some of which (e.g. the cut-off wheel) the entire wheel is made of the alloy.

Use coupon page 54

PIPE SWING JOINT

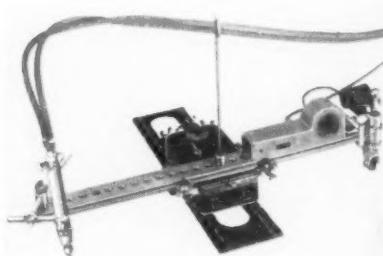


No. 654

MADE IN THREE DESIGNS as illustrated, for parallel, right angle, and straight pipe lines, and a range of four sizes from $1\frac{1}{2}$ to $1\frac{1}{4}$ inches, this new swing joint contains an assembly of five packing rings located between an inner hub and the outer shell. This arrangement maintains a leak-tight joint without interfering with the flexibility of rotation.

Use coupon page 54

FLAME CUTTING MACHINE



No. 655

FOR CUTTING STRAIGHT or irregular outlines in steel plate, this power-driven cutter is mounted on a track and will cut to any length depending on the amount of track used. It will handle work up to 30 inches in width without changing the set-up. The cross arm carries an adjustable torch at one end

as a
and a tracing mechanism at the other, and rides in roller guides on the main carriage. There is an adjustment for speed of travel, and standard equipment includes a radius-cutting rod and a section of track. Operating current can be either 110 or 220 volts, as specified.

Use coupon page 54



LIGHT DUTY DRILL AND GRINDER

No. 656

ORIGINALLY DESIGNED AS home workshop tools, this miniature drill and grinder have found considerable acceptance in miscellaneous industrial applications involving light duty and intermittent service. Within these limitations, the tools are effective, accurate and convenient. The combination kit includes a $\frac{1}{4}$ -inch drill, a hand grinder, and five accessories. The drill is about the size and weight of a small pocket revolver and handles with much the same ease; it operates at 1,000 rpm. and is rated for $\frac{1}{4}$ -inch in steel. The grinder has been shortened to the proportions of a small apple and fits comfortably in the hand; it operates at 20,000 rpm. Modern in design, the tools are finished in blue crackle enamel with die-cast white metal ends and trim, and are fitted in a blue enameled steel carrying case with handle.

Use coupon page 54



WOOD SHEAVE

No. 657

THIS NEW LINE of sheaves is constructed of hard maple segments, chemically treated and assembled with the grain on end between a pair of steel clamping plates. This construction, used for many years in wheel construction, is highly resistant to wear and holds to a true round. The sheaves are adapted to use with belts, rope or cable, and are manufactured to specification in desired sizes for tight assembly on a shaft or to ride the shaft on oilless end-wood bearings, ball or roller bearings.

Use coupon page 54

SEPTEMBER 1938

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PAGE 61

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PITTSBURGH, PA.—Scheinman-Neaman Co., 1024 Vickroy St.
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